

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 21, 2004, 06:36:06 ; Search time 40 Seconds  
(without alignments)  
942.924 Million cell updates/sec

Title: US-10-628-395-2  
Perfect score: 1987  
Sequence: 1 MDTIFWLSLLFFGQASR.....FIMKHNPTESILFMGRVTNP 392

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database :

PIR 79:.\*  
1: Piri:.\*  
2: Piri2:.\*  
3: Piri3:.\*  
4: Piri4:.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	788.5	39.7	410	2 S70647	neuroserpin precu
2	728	36.6	191	2 S49162	ZG-21p protein - r
3	650	32.7	390	2 I38201	squamous cell carc
4	635	32.0	390	2 I38202	leupin precursor -
5	589	29.6	376	1 A48681	placental thrombin
6	586	29.5	388	1 DYCH	ovalbumin-related
7	577.5	29.1	379	2 A42421	leukocyte elastase
8	577	29.0	400	2 JC4265	plasminogen activa
9	575	28.9	397	2 I48717	proteinase inhibit
10	573.5	28.9	379	2 S27383	elastase inhibitor
11	570.5	28.7	402	1 A35032	plasminogen activa
12	569	28.6	378	2 A57488	proteinase inhibit
13	562.5	28.3	397	2 B27496	proteinase inhibit
14	561	28.2	378	2 S38962	serpin - pig
15	558	28.1	398	2 A37274	glia-derived nexin
16	558	28.1	402	1 S06745	plasminogen activa
17	555.5	28.0	402	1 A34761	plasminogen activa
18	553.5	27.9	418	2 JX0129	contrapsin precurs
19	552	27.8	418	2 S23675	contrapsin-related
20	548.5	27.6	397	2 I39184	bomapsin - human
21	547.5	27.6	391	2 JG7118	headpin serine pro
22	547	27.5	385	1 OACH	ovalbumin [validat
23	544.5	27.4	383	2 S11433	ovalbumin - Japane
24	544.5	27.4	464	1 XHHU3	antithrombin III p
25	537	27.0	465	2 I59611	antithrombin III -
26	535.5	27.0	418	1 S31507	serine proteinase
27	535	26.9	431	1 JX0364	antithrombin III -
28	533	26.8	374	2 A59273	proteinase inhibit
29	530	26.7	402	1 ITHU91	plasminogen activa

30	526.5	26.5	433	1 ITHUC	alpha-1-antichymot
31	524	26.4	465	1 S28219	antithrombin III p
32	523.5	26.3	408	2 A55533	intracellular coag
33	521	26.2	433	1 A61435	antithrombin III -
34	515.5	25.9	410	2 I50494	serine proteinase
35	515.5	25.9	415	2 A32853	plasminogen activa
36	514.5	25.9	413	2 JX0154	alpha-1-antiprotei
37	509.5	25.6	413	2 JX0267	alpha-1-antiprotei
38	507.5	25.5	413	2 A54968	alpha-1-antitrypsi
39	507	25.5	376	2 B59273	proteinase inhibit
40	506	25.5	408	2 S11320	serine proteinase
41	502.5	25.3	413	2 S54981	alpha-1-antiprotei
42	500.5	25.2	403	2 S08102	serine proteinase
43	499.5	25.1	417	2 S19724	kallikrein-binding
44	498	25.1	416	2 B29131	kallikrein-binding
45	494.5	24.9	359	2 D88940	protein C0584.1 [1

ALIGNMENTS

RESULT 1

S70647  
neuroserpin precursor - chicken  
C:Species: Gallus gallus (Chicken)  
C:Date: 14-Feb-1997 #sequence\_revision 13-Mar-1997 #text\_change 09-Jul-2004  
C:Accession: S70647; S77695  
R:Osterwalder, T.; Contatases, J.; Stoeckli, E.T.; Kuhn, T.B.; Sonderegger, P.  
EMBO J. 15, 2944-2953, 1996  
A:Title: Neuroserpin, an axonally secreted serine protease inhibitor.  
A:Reference number: S70647; MUID:96272154; PMID:8670795  
A:Accession: S70647  
A:Molecule type: mRNA  
A:Residues: 1-410 <OSTL>  
A:Cross-references: UNIPROT:Q90935; EMBL:Z71930; NID:gl359667; PIDN:CAA96493.1; PID:gl3  
A:Experimental source: brain  
A:Accession: S77695  
A:Molecule type: protein  
A:Residues: 17-40;243-257;288-293;309-317 <OST>  
C:Superfamily: Serpin  
C:Keywords: serine proteinase inhibitor  
F:1-16/Domain: signal sequence #status predicted <SIG>  
F:17-410/Product: neuroserpin #status experimental <MAP>

Query Match	39.7%	Score 788.5	DB 2	Length 410
Best Local Similarity	40.0%	Pred. No. 7.3e-45		
Matches	158	Conservative	92	Mismatches 138
			Indels	7
			Gaps	3
QY	5	FLWSLLLLFFGQASRCSAQKNT--EPAVDLYQEVSLSHKD-NIIFSLGITLVLEWYQL	61	
DB	3	FLGLSLVLVPSKAFKTNFPDPTTAELSVNYNQIARAEDENILFCPLSTAIAMGMIEL	62	
QY	62	GAKGKACQOIQTLLKQETSAGBEFLVKFSCSAISEKKQBFTFNLANALYQEGFTVKE	121	
DB	63	GAGHTLKEIRHSLGFDLSKNGEEFTFLKDLSDMATTESHVNLNMANSLVQNGFHVSE	122	
QY	122	QYLHGNKEFFFOSAIKLVDFQAKAEMISTWVERKTGKIKDMFSGEFGPLRLVLVN	181	
DB	123	KFLQLVKYKFAEVENIDFQSAVAATHINKWENVNTNMIXDFVSSDFLSALTHVLIN	182	
QY	182	ATYFKGDMKQFRKEDTQILNFTKNGSTVKIPMMKALLRTKYGYSSESLN----	237	
DB	183	ALYFGNWKSKQRPENTRTFTFKDDETEVOIPMYQGEFYFGEFSGSNEAGGIYQL	242	
QY	238	ELSYKGEDFSLLIILPAEGMDIEEVEKLITAAQILKWLSEMCQEEVEISLPRFKVEQKD	297	
DB	243	EIPYEGDEISMVLSRQEVPLVLEPLVKASLINEMANSVKQKVEYVLPFRFTVEQED	302	
QY	298	FKDVLVSLNIHIFSGGCDLSCITDSSSVVYSQVTKQFFFEINDEGSAANTSGHIFVI	357	
DB	303	LKDVLKGLGITTEVFRSADLTAMSONKELYIAKAPHKAFLEVNDEGSEAAASGMIAISR	362	
QY	358	MSLAQSQFIANHPFLFMKHNPTESILFMGRVTNP	392	

Db

363	MAVLYPOVIVDHPFFFLVNRRTGTGLEMGCRMHP	397
	::	
	::	

## RESULT 2

ZG-21p protein - rat  
S49162  
C:Species: Rattus norvegicus (Norway rat)  
C:Date: 16-Feb-1995 #sequence\_revision 12-May-1995 #text\_change 09-Jul-2004  
R:Accession: S49162  
R:Cronshagen, U.; Chen, C.; Kern, H.F.  
A:Submitted to the EMBL Data Library, March 1994  
A:Description: A novel protein expressed exclusively in pancreas is proposed to be a ser  
A:Reference number: S49162  
A:Accession: S49162  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-191 <CRO>  
A:Cross-references: UNIPROT:Q63347; EMBL:Z30585; NID:G510193; PID:G5101  
C:Superfamily: Serpin

Query Match	36.6%	Score 728	DB 2	Length 191
Best Local Similarity	77.0%	Pred. No. 2.7e-41		
Matches 137	Conservative	22	Mismatches 19	Indels 0
			Gaps 0	
215	MMKALLRTKGYGFSESSLNQVLELSYKGDPELSLIILPAEGMDLVEEKLTAQOILKW	274		
1	MMKALLRAKGYGFSESSNTQVLELPYKADPELSVILLPTEDVNVEEKQVTAHHQVKW	60		
275	LSEMQEEVEISIPRRFVEQKDFKDVLYSLNATIEFSGCDLSGITTSSEVVSQVTK	334		
61	FSELHSEVEVSUPRFKIEQKDFKCALPSLVNTEIFSGCDLSGITTSSELYVSANQK	120		
335	VFFPINDGGEAATSTGIHPVIMSLAQSQFTANHPFLFMKHNPTESILFMGRVTNP	392		
121	VFFPINDGGEAAASTGINPALMSITOTFLANHSFLFMKHIOTESILFMGKVTDP	178		

RESULT 3  
138201  
squamous cell carcinoma antigen 1 - human  
C.Species: Homo sapiens (man)  
C.Date: 23-Feb-1996 #sequence revision 23-Feb-1996 #text\_change 09-Jul-2004  
C.Accession: 138201: 138200: G01631: J07066: J07067  
C.Reviewer: S.S.; Schick, C.; Fish, K.E.; Miller, E.; Pena, J.C.; Treter, S.D.; Hui, S.  
Proc. Natl. Acad. Sci. U.S.A. 92, 3147-3151, 1995  
A.Title: A serine proteinase inhibitor locus at 18q21.3 contains a tandem duplication of  
A.Reference number: 138200: MUID:95241462; PMID:7724531

A;Cross-references: GB:S66896; NID:G239551; PIDN:AAB20405.1; PID:G239552  
 A;Accession: J00967  
 A;Molecule type: protein  
 A;Residues: 11-21,231-237;240-256;303-325 <SUM>  
 C;Comment: This antigen probably acts as a proteinase inhibitor to modulate  
 C;Genetics:  
 A;Gene: GDB:SCC1; SCC  
 A;Cross-references: GDB:625364; OMIM:600517  
 A;Map position: 18q21.3-18q21.3  
 A;Stem: 55/3; 74/3; 117/3; 157/1; 204/3; 256/3  
 C;Superfamily: Serpin  
 C;Keywords: cysteine proteinase inhibitor; glycoprotein  
 F.65.93.171.376/Binding site: carboxhydrate (Asn) (covalent) #status predicted  
 F.354/Inhibitory site: Ser (cathesin L) #status predicted

Query Match	32.7%;	Score	650;	DB	2;	Length	390;	
Best Local Similarity	35.1%;	Prod.	No. 9.9e-36;					
Matches	138;	Conservative	90;	Mismatches	135;	Indels	30;	
							Gaps	6;
<hr/>								
QY	23	AOKTTERAVDLYOEVSLSHKDNIIFSPGLGITVLVLEWVOLGAKGKAQQOIROTLKQOETS-	81					
DB		5 SEANTKFWFLDFOQFRKSKENNIIFYSPISITGALGMVLGAKDNTAQOIKKVLHFDQVTE	64					
		QY	82	-----AGEEFLVLKSFCSAISKEQOETFFNLNALYLOEGTTVKEQYTLHGNC	128			
DB		65 NTTGKAATYHVRDSGNVHHQFOKLLTEFNKSTDAVELKIANKLFEKTYLFLQEYLDIAK	124					
QY	129	EFFOSAIKLVDFDODA-KACAEMISTWVERKTGDKIKDMFSGEECPPLTFLVNAIVFKG	187					
DB	125	KFYOTSVESVDFANAPESRKKNISWVESQTNTEKIKNIPEGNIGSNTTLLVNAIVFKG	184					
QY	188	DWKQFKREDTQLINTTKNGSTVKTPMMKALLRTKYGFSESSLYNVLELSYKGBEFS	247					
DB	185	QWEXKFNKEDTKEEKWPKNVTKYSIQWRRQY--TSFHFASUEDVQAKVLBIPIYKGDLS	242					
QY	248	LIILPAGMDIEVEKLTAQOILKW--LSMQGEEVEISLPRFKVEQKVDFKVLVYSL	305					
DB	243	MIVLLPNEIDGLOKBEKLTAEKLEWTSIQWNRRETRVDLHLPRFKVEESYDLKDTLRM	302					
QY	306	NITEIFSGGCDLSGIIITSDSEVVVSQVTKVFPEINEDGSEAAATSGIHIPVIMSIAQS--	363					
DB	303	GMVDIFNGDADLDSGMTSGRLVLSGVLHKAFFVEVTEEGEAAAAAT-----AAVAFGS	357					
		QY	364	----QFTAHFPFLFMKHNPTEISILFMGRVTNP	392			
DB	358	STNEEPHCNHPFLFFIRONKTNLSILFYGRFSSP	390					

RESULT 4  
138202  
leupin precursor - human  
N:AlterName: proteinase inhibitor 11 (PI11); squamous cell carcinoma antigen 2  
C:Species: Homo sapiens (man)  
C:Date: 23-Feb-1996 #sequence revision 23-Feb-1996 #text\_change 15-Sep-2003  
C:Accession: I38202; S66675; S57522  
C:Author: S.S.; Schnieder, S.S.; Chick, C.; Fish, K.E.; Miller, E.; Pena, J.C.; Treter, S.D.; Hui, S.  
C:Proc: Natl. Acad. Sci. U.S.A. 92, 3147-3151, 1995  
A:Title: A serine proteinase inhibitor locus at 18q21.3 contains a tandem duplication of  
A:Accession number: I38200; MUID:95241462; PMID:7724531  
A:Accession: I38202  
A:Status: nucleic acid sequence not shown  
A:Molecule type: DNA  
A:Residues: 1-390 <SCH>  
A:Cross-references: EMBL:U19576; GB:U19569; NID:g852466  
R:Barne, R.C.; Worrall, D.M.  
FEBS Lett. 373, 61-65, 1995  
A:Title: Identification of a novel human serpin gene; cloning sequencing and expression  
A:Accession number: S66675; MUID:96013887; PMID:7589435  
A:Accession: S66675  
A:Molecule type: mRNA  
A:Residues: 7-351, 'V', 353-384 <BAR>  
A:Cross-references: EMBL:X89015; NID:g887464; PIDN:CAA61420.1; PID:g887465  
C:Genetics:

A:Gene: GDB:SCA2; P111  
A:Cross-references: GDB:636556; OMIM:600518  
A:Map position: 18q21.3-18q21.3  
A:Introns: 55/3; 74/3; 117/3; 157/1; 204/3; 256/3  
C:Superfamily: Serpin  
C:Keywords: glycoprotein; serine proteinase inhibitor  
F:1-22/Domain: signal sequence #status predicted <SIG>  
F:23-384/Product: leupin #status predicted <MAT>  
F:65, 93, 170, 376/Binding site: carbohydrate (Asn) (covalent) #status predicted  
F:354/Inhibitory site: Leu (unidentified proteinase) #status predicted

Query Match 32.0%; Score 635; DB 2; Length 390;  
Best Local Similarity 35.0%; Pred. No. 9.7e-35;  
Matches 138; Conservative 90; Mismatches 134; Indels 32; Gaps 7;

QY 23 AOKTEFAVDLYQEVSLSHKDNIFSPGLGTLVLEMVQLGAKGAKQAQQIQTQLKQOETS- 81  
DB 5 SEANTFEMDFLQFQPKSKENNIFYPISITSLGNVLGAKDNTAQQLSKVLHPDQVTE 64  
QY 82 -----AGBEFLVLSFCSAISEKKQ---EFTFNLANALYQEGTVKEQVYHGNK 128  
DB 65 NTTEKAATYHVDKSGNVHGFQKLLTEFNKSTDAYELKIANKLFGKTYQFLQEVYDAIK 124  
QY 129 EFQSAIKLVDFODA-KACAEMISTWVERKTDGKIKDMFSGBEFGPLTLVLVNAIYFKG 187  
DB 125 KFYQTSVESTDFANAESEKKNWSVESQTNKEIKNLPFDGTIGNDTLVLVNAIYFKG 184  
QY 188 DWQKFRKEDTQLINFTKNGSTVKIPMKALLRTKYGVSFBSL---NYQVLELSYKGD 244  
DB 185 QWENKFKKENTKEEFKFNKNTYKVSQVMMR-----QVNSFNALLEDVQAKVLEIYKGG 239  
QY 245 EFLSIILPAGMDIEVEKLITAAQILKW--LSEMQEVEEVLSPRFKVEQKVDKVDVL 302  
DB 240 DLSNIVLLNEIDGLQLEELKFAELMEWTSQNNRETCDVJHLRFKFEESYDULKYL 299  
QY 303 YSLNITEIFSGCDLSGITDSSEVVSQVTKQVFFFEINEDGSEAAATSTGIHIPVIMSLA- 361  
DB 300 RTMGWNIPLNGDADLSQWTHSHGLSVKVLHKAIVETEGVEAAATAV---VVFELSS 356  
QY 362 ---QSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
DB 357 PSTNEEPCNHPFLFFIRQNKNTNSILFYGRFSSP 390

RESULT 5  
A48681  
N:Alternate names: cytoplasmic antiproteinase; intracellular serine proteinase inhibitor  
C:Species: Homo sapiens (man)  
C:Date: 07-Apr-1994 #sequence revision 07-Jul-1995 #text change 09-Jul-2004  
C:Accession: A48681; A54352; A46672; B46672; C46672; S35750  
R:Coughlin, P.; Sun, J.; Cerruti, L.; Salem, H.H.; Bird, P.  
Proc. Natl. Acad. Sci. U.S.A. 90, 9417-9421, 1993  
A:Title: Cloning and molecular characterization of a human intracellular serine proteinase  
A:Reference number: A48681; MUID:94022386; PMID:8415716  
A:Accession: A48681  
A:Molecule type: mRNA  
A:Residues: 1-376 <CO>  
A:Cross-references: UNIPROT:P35237; GB:Z22658; NID:g297411; PIDN:CAA80373.1; PID:g297412  
A:Experimental source: placenta  
A:Note: authors translated the codon CAA for residue 198 as Gly  
R:Moegenster, K.A.; Sprecher, C.; Holth, L.; Foster, D.; Grant, F.J.; Ching, A.; Kisiel  
Biochemistry 33, 3432-3441, 1994  
A:Title: Complementary DNA cloning and kinetic characterization of a novel intracellular  
A:Reference number: A54352; MUID:94183847; PMID:8136380  
A:Accession: A54352  
A:Molecule type: mRNA  
A:Residues: 1-174, 'E', 176-361, 'S', 363-376 <MOR>  
A:Cross-references: GB:S69272; NID:g546087; PIDN:AAB30320.1; PID:g546088  
A:Experimental source: placenta  
A:Note: sequence extracted from NCBI backbone (NCBIN:145231, NCBI:P:145232)  
R:Coughlin, P.B.; Tetrah, T.; Salem, H.H.  
J. Biol. Chem. 268, 9541-9547, 1993

A:Title: Identification and purification of a novel serine proteinase inhibitor.  
A:Reference number: A46672; MUID:93252826; PMID:8486644  
A:Accession: A46672  
A:Molecule type: protein  
A:Residues: 47-60; 63-81; 91-98 <CO2>  
A:Experimental source: placenta, leukemic cell line K562  
A:Note: sequence modified after extraction from NCBI backbone  
C:Genetics:  
A:Gene: GDB:PI6  
A:Cross-references: GDB:252025; OMIM:173321  
A:Map position: 6p25-6p24.3  
C:Superfamily: Serpin  
C:Keywords: blocked amino end; cytosol; serine proteinase inhibitor  
F:341/Inhibitory site: Arg (thrombin) #status predicted

Query Match 29.6%; Score 589; DB 1; Length 376;  
Best Local Similarity 35.4%; Pred. No. 1e-31;  
Matches 135; Conservative 85; Mismatches 141; Indels 20; Gaps 9;

QY 23 AOKTEFAVDLYQEVSLSHKDNIFSPGLGTLVLEMVQLGAKGAKQAQQIQTQLKQOETS 82  
DB 5 AEANGTFAINLULKTLGKDNKSNVFFSPMSKALAMVYMGKGNVTAQAQILSFNKS 64  
QY 83 GEEFLVLKSFCSAISEKKQ---EFTFNLANALYQEGTVKEQVYHGNK3FFQSAIKLVD 139  
DB 65 GGD--IHQGFQSLLEVNKTGTQVLLRVANRLFGKSCDFLSFRDSCQKQFYQAEV 122  
QY 140 FQDA-KACAEMISTWVERKTDGKIKDMFSGBEFGPLTLVLVNAIYFKGDKQKFRKEDT 198  
DB 123 FISAVEKSRKHNTWAEKTEGKIAELLSPGSDPLRLVLVNAVYFGNWDGQFQKENT 182  
QY 199 QLIINPTKNGSTVKIPMKALLRTKYGVSFBSLNYQVLELSYKGDPSFLIILPAEGMD 258  
DB 193 EERLQFKVSKNEEKPQVMFKOSTFKTYGE--IFTQILVLPYVKGELNMIILPDET 240  
QY 259 IEVEKLITAAQILKW--LSEMQEVEEVLSPRFKVEQKVDKVDVLSLNLTEIFS-GGC 315  
DB 241 LRTVEKLTVEKFEWTRLDMDDEEVEVSLPRFKLSESYDMESVRLNGLMTDAFELGKA 300  
QY 316 DLSGITDSSEVVSQVTKQVFFFEINEDGSEAAATSTGIHIPVIMSLAQSQFI---ANHPP 371  
DB 301 DFGMS-QTDLSLSKVHKSFEVNEEGTEAAATA---AIIIMRCARFVRFCDHPF 355  
QY 372 LFIMKHNPESILFMGRVTNP 392  
DB 356 LFFIQHRTKNGILFCGRFSSP 376

RESULT 6  
D4CH  
ovalbumin-related Y protein - chicken  
C:Species: Gallus gallus (chicken)  
C:Date: 17-Dec-1982 #sequence revision 17-Dec-1982 #text change 09-Jul-2004  
C:Accession: A01244  
R:Heilig, R.; Muraskovsky, R.; Kloepfer, C.; Mandel, J.L.  
Nucleic Acids Res. 10, 4363-4382, 1982  
A:Title: The ovalbumin gene family: complete sequence and structure of the Y gene.  
A:Reference number: A01244; MUID:83014329; PMID:7122240  
A:Accession: A01244  
A:Molecule type: DNA  
A:Residues: 1-388 <HEI>  
A:Cross-references: UNIPROT:P01014; GB:J00922; GB:V00439; NID:g212899; PIDN:AAA68882.1.  
C:Genetics:  
A:Introns: 56/3; 73/3; 116/3; 156/1; 203/3; 255/3  
C:Superfamily: Serpin  
C:Keywords: glycoprotein; phosphoprotein; serine proteinase inhibitor  
F:74-121/Disulfide bonds: #status predicted  
F:293/Binding site: carbohydrate (Asn) (covalent) #status predicted  
F:345/Binding site: phosphate (Ser) (covalent) #status predicted

Query Match 29.5%; Score 586; DB 1; Length 388;  
Best Local Similarity 32.5%; Pred. No. 1.7e-31;  
Matches 125; Conservative 95; Mismatches 143; Indels 22; Gaps 9;

QY 26 NTEFAVDLYQEVSLSH-KDNIIFSPGLITLVLEWVQVQKAGKAAQOQIROTILK-QQETSAG 83  
 DB 8 NAKFCDFVFNEMKVVHVNENLYCPLSILTALAMVYLARGNTESQMKVLFHDSITGAG 67  
 QY 84 -----EFL--VLKSFCSAISSEKKEFTFNLANALYLQEGFTVKQEVSLHGNKEPFSQAIKLVDFOQ 142  
 DB 64 EDHSRFSQSLNADINKPGAPYLKLANRLYGKTYNFLADFLASTQKMYGSELASVDFQO 123  
 QY 143 AKACA-EMISTWVERKTDGKI-KDMPSGEEFGLRLVLVNAIYFKGDKQKFRKEDTQLI 201  
 DB 124 APEDARKEINEMKQTEGKIPELLVKGMDVNMNTKLVLVNAIYFKGQWQEKMEATRDA 183  
 QY 202 NF--TKNGSTVKIPMKALLRTKYGVSSESLNVQVLELSYKGDSESLIILP----AE 255  
 DB 184 PRLNKKTKVK--MYQKKKFPYNYED--LKRVLLELPYQKELSMILLDDIEDE 239  
 QY 256 GMDIEVEKLITAOQILKWL--SEMQEEVEISLPRFKVEQKVDKDVLYSLNTEIFS- 312  
 DB 240 STGLEKIEKQTLLEKRLREWTXPNLYLAENVVHLPRFKLEESYDLTSHLARLVQDILFN 299  
 QY 313 GGCDSGLITDSSEVVSVQVTKVFEINDEGSEATSTGHIHPVIMSLAQSOFTANHPFL 372  
 DB 300 GKADLSGMSGARDLFSVKLIHKSFVDLNEEGTEAAATAGTILMLAMPSENFADHPFI 359  
 QY 373 FIMKHNPTEISILFMGRVTNP 392  
 DB 360 PFIRENPSANILFLGRFSSP 379

RESULT 8  
 JC4265  
 plasmिनogen activator inhibitor type 1 precursor - American mink  
 C:Species: Mustela vison (American mink)  
 C:Date: 19-Oct-1995 #sequence\_revision 08-Feb-1996 #text\_change 09-Jul-2004  
 C:Accession: JC4265  
 R:Chuang, T.H.; Hamilton, R.T.; Nilsen-Hamilton, M.  
 Gene 162, 303-308, 1995  
 A:Title: Cloning of the mink plasmिनogen activator inhibitor type-1 messenger RNA: An mRNA  
 A:Reference number: JC4265; MUID:96032362; PMID:7557448  
 A:Accession: JC4265  
 A:Molecule type: mRNA  
 A:Residues: 1-400 <CHU>  
 A:Cross-references: UNIPROT:P50449; EMBL:X58541; NID:g1164923; PIDN:CAA1433.1; PID:g116  
 A:Experimental source: lung CDL64 epithelial cells  
 C:Comment: This protein controls the activities of the plasmिनogen activators and plasmिन  
 C:Genetics:  
 A:Gene: pai-1  
 C:Superfamily: Serpin  
 C:Keywords: glycoprotein; plasmिनogen activator; serine proteinase inhibitor  
 F:1-21/Domain: signal sequence #status predicted <SIG>  
 F:22-400/Product: plasmिनogen activator inhibitor type 1 #status predicted <MAT>  
 F:230,286,350/Binding site: carbohydrate (Asn) (covalent) #status predicted  
 F:367/Inhibitory site: Arg (plasmिनogen activator) #status predicted

Query Match 29.1%; Score 577.5; DB 2; Length 379;  
 Best Local Similarity 35.5%; Pred. No. 6e-31;  
 Matches 135; Conservative 86; Mismatches 138; Indels 21; Gaps 10;  
 QY 26 NTEFAVDLYQEVSLSH-KDNIIFSPGLITLVLEWVQVQKAGKAAQOQIROTILK-QQETSAG 83  
 DB 8 NAKFCDFVFNEMKVVHVNENLYCPLSILTALAMVYLARGNTESQMKVLFHDSITGAG 67  
 QY 84 -----EFL--VLKSFCSAISSEKKEFTFNLANALYLQEGFTVKQEVSLHGNKEPFSQAIKLVDFOQ 142  
 DB 64 EDHSRFSQSLNADINKPGAPYLKLANRLYGKTYNFLADFLASTQKMYGSELASVDFQO 123  
 QY 143 AKACA-EMISTWVERKTDGKI-KDMPSGEEFGLRLVLVNAIYFKGDKQKFRKEDTQLI 201  
 DB 124 APEDARKEINEMKQTEGKIPELLVKGMDVNMNTKLVLVNAIYFKGQWQEKMEATRDA 183  
 QY 202 NF--TKNGSTVKIPMKALLRTKYGVSSESLNVQVLELSYKGDSESLIILP----AE 255  
 DB 184 PRLNKKTKVK--MYQKKKFPYNYED--LKRVLLELPYQKELSMILLDDIEDE 239  
 QY 256 GMDIEVEKLITAOQILKWL--SEMQEEVEISLPRFKVEQKVDKDVLYSLNTEIFS- 312  
 DB 240 STGLEKIEKQTLLEKRLREWTXPNLYLAENVVHLPRFKLEESYDLTSHLARLVQDILFN 299  
 QY 313 GGCDSGLITDSSEVVSVQVTKVFEINDEGSEATSTGHIHPVIMSLAQSOFTANHPFL 372  
 DB 300 GKADLSGMSGARDLFSVKLIHKSFVDLNEEGTEAAATAGTILMLAMPSENFADHPFI 359  
 QY 373 FIMKHNPTEISILFMGRVTNP 392  
 DB 360 PFIRENPSANILFLGRFSSP 379

RESULT 7  
 A42421  
 leukocyte elastase inhibitor - horse  
 N:Alternate names: plasmिनogen activator inhibitor-2 homolog  
 C:Species: Equus caballus (domestic horse)  
 C:Date: 04-Mar-1993 #sequence\_revision 18-Nov-1994 #text\_change 09-Jul-2004  
 C:Accession: A42421; A37276; S34062  
 R:Dubin, A.; Travis, J.; Enghild, J.J.; Potempa, J.  
 J. Biol. Chem. 267, 6576-6583, 1992  
 A:Title: Equine leukocyte elastase inhibitor. Primary structure and identification as a  
 A:Reference number: A42421; MUID:92202200; PMID:1551869  
 A:Accession: A42421  
 A:Status: preliminary  
 A:Molecule type: protein  
 A:Residues: 1-379 <DUB1>  
 A:Cross-references: UNIPROT:P05619; PIDN:AAB21885.1; PID:G247842  
 A:Experimental source: leukocyte  
 A:Note: sequence extracted from NCBI backbone (NCBIP:89849)  
 R:Dubin, A.; Travis, J.; Enghild, J.J.; Potempa, J.  
 submitted to the Protein Sequence Database, December 1991  
 A:Reference number: A37276  
 A:Accession: A37276  
 A:Molecule type: protein  
 A:Residues: 1-41, E', 43-325, 'VD', 326-379 <DUB2>  
 R:Kordula, T.; Dubin, A.; Schooltink, H.; Koj, A.; Heinrich, P.C.; Rose-John, S.  
 Biochem. J. 293, 187-193, 1993  
 A:Title: Molecular cloning and expression of an intracellular serpin: an elastase inhibi  
 A:Reference number: S34062; MUID:93319507; PMID:7687128  
 A:Accession: S34062  
 A:Status: preliminary  
 A:Molecule type: mRNA  
 A:Residues: 1-379 <KOR>  
 A:Cross-references: GB:M91161; NID:g164240; PIDN:AAA97513.1; PID:g164241  
 C:Superfamily: Serpin  
 C:Keywords: serine proteinase inhibitor

Query Match 29.1%; Score 577.5; DB 2; Length 379;  
 Best Local Similarity 35.5%; Pred. No. 6e-31;  
 Matches 135; Conservative 86; Mismatches 138; Indels 21; Gaps 10;  
 QY 26 NTEFAVDLYQEVSLSH-KDNIIFSPGLITLVLEWVQVQKAGKAAQOQIROTILK-QQETSAG 83  
 DB 8 NAKFCDFVFNEMKVVHVNENLYCPLSILTALAMVYLARGNTESQMKVLFHDSITGAG 67

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Db 235 STPEGRYDILEPYHGDULSMFIAAPYEKDVFLSALTNLIDLAQLISQWKGNMTRRLRL 294
Qy 286 SLRPFKVEQKVDKDVLYSLNITEIF-SGGCDLSGTDSEVYVSQVTKVFEINEDGS 344
Db 295 VLPKFSLESEVNLGRPLENIGMTDMFRPNQADFSLSQDEALYVSQALQKVLIEVNESGT 354
Qy 345 EAATSTGIHPVIMSLAQSOFIANHPFLFMKHNPTESILFMGRVTNP 392
Db 355 VASSSTAILVSAEM--APEIINDRPFLLFVVRNPTGTVLFGQVMEP 400

RESULT 9
I48717
proteinase inhibitor nexin I precursor - mouse
C:Species: Mus musculus (house mouse)
C>Date: 02-Jul-1996 #sequence revision 02-Jul-1996 #text_change 09-Jul-2004
C/Accession: I48717; S70772; S55731
C/Rasmussen, J.D.; Huarte, J.; Bosco, D.; Sappino, A.P.; Velardi, A.; Wohlwe
EMBO J. 12, 1871-1878, 1993
A:Title: Protease-nexin I as an androgen-dependent secretory product of the murine semin
A:Reference number: I48717; MUID:93259128; PMID:8491179
A:Accession: I48717
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-397 <RES>
A/Cross-references: UNIPROT:Q07235; EMBL:X70296; NID:9551064; PIDN:CAA49777.1; PID:95510
A:Map position: 6p25-6p24.3
A:Superfamily: Serpin
C:Keywords: serine proteinase inhibitor
C:Superfamily: Serpin
C:Keywords: serine proteinase inhibitor

Query Match 28.9%; Score 575; DB 2; Length 397;
Best Local Similarity 33.4%; Pred. No. 9.3e-31;
Matches 134; Conservative 93; Mismatches 152; Indels 22; Gaps 10;
Qy 1 MDTFLMSLLLPFGSQARCSAQK-NTEFAVDLYQEVSLSH-KDNIFPLGTLVLEM 58
Db 10 LTTVTLYSV-----HSQFNLSLBLEGSNTGIVFNQIKSRPHENVVSPHGLASILGM 64
Qy 59 VOLGAKGAQOOIRCTLKOQETSAGEEFLVKSPCSAISSEKQOEFTEFNALANALYLOEGFT 118
Db 65 LQLGADGTTKQLSTWMEYVNGVK---VLKTKNKALVSKONKDIYTVANAVFLRNGFX 121
Qy 119 VKEQYLHGNKEFFQSAIKLVDFODAKACAEIMSTWVERKTDGKIKMFSGEEF-GPLTRL 177
Db 122 MEVPAVRKDVQCEVQVNFQDPASASEINFWKNETRGMIDNLLSPNLDGALTRL 181
Qy 178 VLVNAYLPGDWKQKFRKEDTOLNFTKNGSTWIKPMKALLRTKGYF-SESSLYNQV 236
Db 182 VLVNAYLPGDWKQKFRKEDTOLNFTKNGSTWIKPMKALLRTKGYF-SESSLYNQV 241
Qy 237 LELSYKGFDEFSLLIILPAE-GMDIEVEKLITAOQILKWLSEMVEEISLPRFKVEQK 295
Db 242 TELPYHGESISMLIALPTESSTPLSAIPIHTTKTIDSMNMTVPKMQVLVLPKFTAVAQ 301
Qy 296 VDFKDVLYSLNITEIFS-GGCDLSGTDSEVYVSQVTKVFEINEDGSAAATSTGIHI 354
Db 302 TDLKEPLKALGITEFPEFSKANFTKITRSESLHSHLQKAKIEVSEDKASAAAT----- 357
Qy 355 FVIMSLAQOQ---FIANHPFLFMKHNPTESILFMGRVTNP 392
Db 358 -TAILIARSSPWFIVDRPFLESIRHNTGAILFLGQVYKP 397

RESULT 10
```

```
S27383
elastase inhibitor - human
C:Species: Homo sapiens (man)
C>Date: 13-Jan-1995 #sequence revision 13-Jan-1995 #text_change 09-Jul-2004
C/Accession: S27383; S65750
C/Rasmussen, J.D.; Huarte, J.; Bosco, D.; Sappino, A.P.; Velardi, A.; Wohlwe
EMBO J. 12, 1871-1878, 1993
A:Title: Sequence and molecular characterization of human monocyte/neutrophil elastase
A:Reference number: S27383; MUID:92302296; PMID:1376927
A:Accession: S27383
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-379 <RES>
A/Cross-references: UNIPROT:P30740; EMBL:M93056
R:Packard, B.Z.; Lee, S.S.; Remold-O'Donnell, E.; Komoriya, A.
Biochim. Biophys. Acta 1269, 41-50, 1995
A:Title: A serpin from human tumor cells with direct lymphoid immunomodulatory activity
A:Reference number: S65750; MUID:96049524; PMID:7578269
A:Accession: S65750
A>Status: preliminary
A:Molecule type: protein
A:Residues: 57-69; 97-110; 111-129; 204-213; 216-244; 255-271; 'X', 273-274; 291-301 <PAC>
C:Genetics:
A:Gene: GDB:ELANH2; EI; PT2
A/Cross-references: GDB:132914; OMIM:130135
A:Map position: 6p25-6p24.3
A:Superfamily: Serpin
C:Keywords: serine proteinase inhibitor

Query Match 28.9%; Score 573.5; DB 2; Length 379;
Best Local Similarity 34.9%; Pred. No. 1.1e-30;
Matches 132; Conservative 86; Mismatches 143; Indels 17; Gaps 9;
Qy 26 NTEFAVDLYQEVSLSH-KDNIFPLGTLVLEMVQLGAKGAQOOIRCTLKOQETSAGE 84
Db 8 NTRFALDLFALSENNPNAGNIFISPFSSSAMAMVFLGTRGNNTAAQLSKTF--HPTNTEE 65
Qy 85 EFLVLKSPCSAISSEKQOEFTEFNALANALYLOEGFTVKEOYLHGNKEFFQSAIKLVDFODAK 144
Db 66 VHSRFQSLNADINKGASVILKLANRLYGEKTYNLPFLSVSTQKTYGADLASVDFOHAS 125
Qy 145 ACA-EMISTWVERKTDGKIKMFSGEEFGLTRLVLNAYLPGDWKQKFRKEDTQLNLF 203
Db 126 EDARKTINQVKGQTEGKIPPELLASGMVDNMTKLVNAYLPGDWKQKFRKEDTQLNLF 185
Qy 204 --TKNGSTVTKIPMKALLRTKGYFSESSLYNQVLELSYKGFDEFSLLIILP---ABGM 257
Db 186 RLNKDKRKTVK--MMYQKKFAFYTED--LKCRLVIELPYQGEELSMWILLPDDIEDST 241
Qy 258 DIEVEKLITAOQILKWL--SEMVEEVEISLPRFKVEQKVDKDVLYSLNITEIF-SGG 314
Db 242 GLKKIEQLTLEKHEWTKPENLDIEVNVSLPRFLEESYTLNSDLARLGVQDLFNSSK 301
Qy 315 CDLSGTDSEVYVSQVTKVFEINEDGSAAATSTGIHIPVIMSLAQSOFIANHPFLFI 374
Db 302 ADLSGMSGARDIFISKVHKSEVYNEEGTEAAAAATAGIATFCMLMPEENFTADHPPLFF 361
Qy 375 MKHNPTESILFMGRVTNP 392
Db 362 IHNSSGSLFLORRSP 379

RESULT 11
A35032
plasminogen activator inhibitor 1 precursor - rat
C:Species: Rattus norvegicus (Norway rat)
C>Date: 10-Sep-1999 #sequence revision 10-Sep-1999 #text_change 09-Jul-2004
C/Accession: A35032; J0490; A60581; A39120
R:Brudzinski, C.J.; Riordan-Johnson, M.; Nordby, E.C.; Suter, S.M.; Gelhrter, T.D.
J. Biol. Chem. 265, 2078-2085, 1990
A:Title: Isolation and characterization of the rat plasminogen activator inhibitor-1 ge
A:Reference number: A35032; MUID:90130456; PMID:2298740
A:Accession: A35032
```

A:Molecule type: DNA  
 A:Residues: 1-402 <BR>  
 A:CROSS-references: UNIPROT:P20961; GB:J05206; NID:G205965; PIDN:AAA41796.1; PID:G205966  
 R:Zehnb, R.; Gelsehrter, T.D.  
 Gene 73, 459-468, 1988  
 A:Title: Cloning and sequencing of cDNA for the rat plasminogen activator inhibitor-1.  
 A:Reference number: J70490; MUID:89211983; PMID:3149611  
 A:Accession: J70490  
 A:Molecule type: mRNA  
 A:Residues: 1-402 <Z>  
 A:CROSS-references: GB:M24067; NID:G577500; PIDN:AAA56856.1; PID:G577501  
 R:Newman, M.J.; Lane, E.A.; Iannotti, A.M.; Nugent, M.A.; Pepinsky, R.B.; Keski-Oja, J.  
 Endocrinology 126, 2936-2946, 1990  
 A:Title: Characterization and purification of a secreted plasminogen activator inhibitor on in transcribed NRK cells.  
 A:Reference number: A60581; MUID:90276328; PMID:2190800  
 A:Accession: A60581  
 A:Molecule type: protein  
 A:Residues: 24-48 <NEW>  
 R:Olson Jr., J.A.; Shiverick, K.T.; Ogilvie, S.; Bui, W.C.; Raizaga, M.K.  
 Proc. Natl. Acad. Sci. U.S.A. 88, 1928-1932, 1991  
 A:Title: Angiotensin II induces secretion of plasminogen activator inhibitor 1 and a tissue inhibitor of metalloproteinase 1 from endothelial cells.  
 A:Reference number: A39120; MUID:91156719; PMID:2000398  
 A:Accession: A39120  
 A:Status: preliminary  
 A:Molecule type: protein  
 A:Residues: 24-43, 'G' <OLS>  
 C:Genetics:  
 A:Introns: 91/1; 169/1; 234/1; 300/2; 334/1; 363/1; 391/1  
 C:Superfamily: Serpin  
 C:Keywords: Glycoprotein  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-402/Product: plasminogen activator inhibitor-1 #status experimental <MAT>  
 F:88,232,288,352/Binding site: carbohydrate (Asn) (covalent) #status predicted  
 F:369/Inhibitory site: Arg (plasminogen activator) #status predicted

Query Match 28.7%; Score 570.5; DB 1; Length 402;  
 Best Local Similarity 33.4%; Pred. No. 1.9e-30;  
 Matches 133; Conservative 83; Mismatches 171; Indels 11; Gaps 7;  
 QY 3 TIFLWSLLLPFGSQASRC----SAQKNTFAVDLYQVLSLHKD-NILFPLGILTVLE 57  
 DB 8 TCLTLGLVLFVGRGFAPLPESHTAQATNFGVKVQHVVQASQKDRNVFSPGVSSVLA 67  
 QY 58 MVQLGAKGKAQQIROTLLKQOETSAGEEFLVLKSFCSAISSEKQEFTFNLNLYLQEGF 117  
 DB 68 MLQUTTAGKTRQIQDANGFNISERGTA-PALRLKSLKELMGSWNKNEISTADAIFVQDL 126  
 QY 118 TVKEQYLHGNKEFFQSAIKLVDFQDAKACAEIMSTWERTDGIKDMFSGEEFGPLTLL 177  
 DB 127 ELVQGFNPFKLFRTTVKQDSEVERARFIINDVERHTKGMISOLLAKAGVNELRL 186  
 QY 178 VLNVNLYFKGDWKQKFKEDPTQLNFTKNGSTVKIPMKALLRTKYGYF-SESSLNLYQV 236  
 DB 187 VLNVNLYFNGQWTKPTFLEASTHQRLFKSDGTSISVPMQAQNNKNYTEFTPDGHEYDI 246  
 QY 237 LEYSYKDESLIILLPAE-GMDIEVEKLITAQQLKWLSEMOEVEVEISLPRFKVEQK 295  
 DB 247 LELPYHGETUSMFIAPFEKDVPLSATNILDRELIRQKSNRNLPRLLILPKFSLETE 306  
 QY 296 VDFKDLVLSLNTIEIFSG-CCDLSGTSSEVVVSQVTKVFFPEINEDGSEATSTGIHI 354  
 DB 307 VDLRGLPEKLGWTDIFSSTQADFTSLSDQQLSVAQALQVKVIEVNESGVASSSTAILV 366  
 QY 355 PVIMSLAQSOFIANHFPLFMKNPTESILFMGRVTNP 392  
 DB 367 SARV--APTEMVLDRSFLFVVRNPTETILFMQLMEP 402

RESULT 12

A57488

proteinase inhibitor Spi3 - mouse

C:Species: Mus musculus (house mouse)

C:Date: 08-Dec-1995 #sequence\_revision 08-Dec-1995 #text\_change 09-Jul-2004  
 C:Accession: A57488  
 R:Sun, J.; Rose, J.B.; Bird, P.  
 J. Biol. Chem. 270, 16089-16096, 1995  
 A:Title: Gene structure, chromosomal localization, and expression of the murine homologu  
 A:Reference number: A57488; MUID:95332310; PMID:7608171  
 A:Accession: A57488  
 A:Status: preliminary  
 A:Molecule type: mRNA  
 A:Residues: 1-378 <SUN>  
 A:CROSS-references: UNIPROT:Q60854; GB:U25844; NID:G818902; PIDN:AAA79684.1; PID:G818903  
 C:Genetics:  
 A:Gene: Spi3  
 A:Map position: 13  
 A:Superfamily: Serpin  
 C:Keywords: serine proteinase inhibitor  
 F:343/Inhibitory site: Arg (unidentified proteinase) #status predicted

Query Match 28.6%; Score 569; DB 2; Length 378;  
 Best Local Similarity 33.6%; Pred. No. 2.2e-30;  
 Matches 126; Conservative 82; Mismatches 159; Indels 8; Gaps 4;  
 QY 24 QKNTFAVDLYQVLSLHKDNIIFSPGLITLVLEWVLGAKGKAQQIROTLLKQOETS-- 81  
 DB 6 EANGTFALNLLKILGEDSSKNVFLSPMSISSALAMVFMGAKGTTASQVAQALALDKSGN 65  
 QY 82 -AGEEFLVLKSFCSAISSEKQEFTFNLNLYLQEGFTVKEQYLHGNKEFFQSAIKLVDF 140  
 DB 66 GGDVHQGFQSLLTVEVNTGTYLLRTANRLFGDKTDLASFKDSCCLKFYAELELDF 125  
 QY 141 QDA-KACAEIMSTWERTDGIKDMFSGEEFGPLRLVLNLYFKGDWKQKFKEDQ 199  
 DB 126 QGATEESQCHINTVAKTKEDKIEVLSPGVNSDTSVLVNLVNIYFKGNWEKQFNKEHTR 185  
 QY 200 LINTKNGSTVKIPMKALLRTKYGYFSESSLNLYQVLELSYKDEFSLLIILPAEGMDI 259  
 DB 186 EMPFKVSKNEEKPVOMMPFKKSTFTQTYIGE--IFTKILLPYVSSSELNMIPLDEHVEL 243  
 QY 260 BEVEKLITAQQLKWL--LSEMQEVEVEISLPRFKVEQKDFKDLVLSLNTIEIFSGGCDL 317  
 DB 244 STVEKVTYKFIETWRLDKMDEEVEVFLPKFLEENYNNNDALYKLGWTDAGGRADF 303  
 QY 318 SGITDSEVVVSQVTKVFFPEINEDGSEATSTGIHI PVIMSLAQSOFIANHFPLFMKNH 377  
 DB 304 SGMSKQGLFLSKVYVHKAFVEVNEEGTEAAAATAGMTVRCMRTPTPRFCADHPFLFFIHH 363  
 QY 378 NPTESELFMGRVTNP 392  
 DB 364 VKTNGILFCGRFSSP 378

RESULT 13

B27496

proteinase inhibitor nexin 1 precursor - rat (fragment)

N:Alternate names: glia-derived nexin (GDN)

C:Species: Rattus norvegicus (Norway rat)

C:Date: 30-Jun-1988 #sequence\_revision 30-Jun-1988 #text\_change 09-Jul-2004

A:Accession: B27496; A34538; A42351; B42351

R:Sommer, J.; Gloor, S.M.; Rovelli, G.F.; Hofsteenge, J.; Nick, H.; Meier, R.; Monard, D

Biochemistry 26, 6407-6410, 1987

A:Title: cDNA sequence coding for a rat glia-derived nexin and its homology to members o

A:Reference number: A90519; MUID:88107544; PMID:3427015

A:Accession: B27496

A:Molecule type: mRNA

A:Residues: 1-397 &lt;SOM&gt;

A:CROSS-references: UNIPROT:P07092; GB:M17784; NID:G204283; PIDN:AAA41209.1; PID:G204284

A:Note: the authors translated the codon TGG for residue 156 as Thr

R:Nick, H.; Hofsteenge, J.; Shaw, E.; Rovelli, G.; Monard, D.

Biochemistry 29, 2417-2421, 1990

A:Title: Functional sites of glia-derived nexin (GDN): importance of the site reacting w

A:Reference number: A34538; MUID:90248459; PMID:2337608

A:Accession: A34538

A:Status: preliminary



A:Molecule type: protein  
 A:Residues: 364-394 <NIC>  
 R:Rovelli, G.; Stone, S.R.; Guidolin, A.; Sommer, J.; Monard, D.  
 Biochemistry 31, 3542-3549, 1992  
 A:Title: Characterization of the heparin-binding site of glia-derived nexin/protease nexin  
 A:Reference number: A42351; MUID:92207980; PMID:1554734  
 A:Accession: A42351  
 A:Molecule type: protein  
 A:Residues: 82-96 <ROV1>  
 A:Note: sequence extracted from NCBI backbone (NCBIP:93846)  
 A:Accession: A42351  
 A:Molecule type: protein  
 A:Residues: 165-178 <ROV2>  
 A:Note: sequence extracted from NCBI backbone (NCBIP:93851)  
 A:Accession: A42351  
 A:Molecule type: protein  
 A:Residues: 317-333 <ROV3>  
 A:Note: sequence extracted from NCBI backbone (NCBIP:93856)  
 A:Note: peptide sequences were determined from rat cDNA cloned and expressed in yeast  
 C:Superfamily: Serpin  
 C:Keywords: glycoprotein; serine proteinase inhibitor  
 F:1-20/Domain: signal sequence #status predicted <SIG>  
 F:21-397/Product: proteinase inhibitor nexin 1 #status predicted <NAT>  
 F:159/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 28.3%; Score 562.5; DB 2; Length 397;  
 Best Local Similarity 33.2%; Pred. No. 6.2e-30;  
 Matches 128; Conservative 91; Mismatches 150; Indels 17; Gaps 9;

QY 16 SQSRCSAOK-NTEPAVDLYQEVLSH-KDNILFSPGLITLVLEWVQLGAKGKAQOIRQ 73  
 DB 20 SOLNSLSLEELGSDTGQVFNQIYKSPHENVVISPHGIASILGNLQLGADGRTYKGLST 79  
 QY 74 TLQOETSAGSEFLVFCFSAISEKQEFNFANALYIQBGTVEKQVYVLEHGNKEFFQS 133  
 DB 80 VMRYNNGVGK--VLKINKALIVSKKDKIVTVANAVFRNGPKVEVPAARNKEVFQC 136  
 QY 134 AKLVFDQAKACAEIMSTWERTDGIKDMFGEFF-GPLTLVLVNAIFYGDKQK 192  
 DB 137 EVQSNFQDPSACDAINFVKNTRGMIDNLSPTLSDSALTCLVLVNAVIFYGLWKR 196  
 QY 193 FRKEDTOLINTKNGSTVKIPMKALLRTKYGVF-SESSLYQVLSYKGDFFSLII 251  
 DB 197 FQPENTKRTFVAGDGKSYQVPMALQSLVFRSGSTKTPNGLWYFIELPHGESISMLIA 256  
 QY 252 LPAE-GMDIEVEKLIITAQOILKMLSEMOEVEEISLPRFKVEQKVPKQVLSLNTIEI 310  
 DB 257 LPTESSTLSAIIPIHISTKTINSWNTVPRKMLVLPKFTALAQTDLKEPLKALGITEM 316  
 QY 311 FS-GGCDLSGITDSSEVVSQVTKVFEINEDGSEATSTGIHIPVMSLAQSQ---FI 366  
 DB 317 PEPSKANTFATRSESLVSHILQAKIEVSEDGKAAVT-----TAILIARSPFWFI 371  
 QY 367 ANHPFLFMKHNPTESILFMGRVTNP 392  
 DB 372 VDRPFLFCIRHNPTGAILFLGQVNF 397

RESULT 14  
 S38962  
 serpin - pig  
 C:Species: Sus scrofa domestica (domestic pig)  
 C:Date: 19-Mar-1997 #sequence\_revision 19-Mar-1997 #text\_change 15-Sep-2003  
 C:Accession: S38962  
 R:Feschauer, W.F.; Mentele, R.; Sommerhoff, C.P.  
 Eur. J. Biochem. 217, 519-526, 1993  
 A:Title: Primary structure of a porcine leukocyte serpin.  
 A:Reference number: S38962; MUID:94039085; PMID:7901009  
 A:Accession: S38962  
 A>Status: Preliminary  
 A:Molecule type: protein  
 A:Residues: 1-378 <RES>  
 A:Note: the sequence from Fig. 6 is inconsistent with that from Fig. 5 in having 256-Asn

C:Superfamily: Serpin

Query Match 28.2%; Score 561; DB 2; Length 378;  
 Best Local Similarity 32.7%; Pred. No. 7.3e-30;  
 Matches 126; Conservative 97; Mismatches 130; Indels 32; Gaps 11;

QY 26 NTEPAVDLYQEVLSH-KDNILFSPGLITLVLEWVQLGAKGKAQOIRQTLKQOETSAGE 84  
 DB 8 NTRFALDLFRALNESNPAGNIFISPFSSISALMILLGTRGNTAEQMSKAL----- 58  
 QY 85 EFLVLK-----SPCSAISSEKQOFTFNANALYIQBGTVEKQVYVLEHGNKEFFSQA 137  
 DB 59 HFDTVKDIHSRFSQSLNADINKGASIIKLKLANRLEGEKTYHFLPEFLASTQTYGAELAS 118  
 QY 138 VDF-QDAKACAEIMSTWERTDGIKDMFGEFFGLTRVLVLVNAIFYGDKQKFKRKE 196  
 DB 119 VDFLRASEARKAINEWKEQTEGKIPPELLASGVVDSATKLVLVNAIFYKSGWQKFKPTE 178  
 QY 197 DTQLNF--TKNGSTVKIPMKALLRTKYGVFSESSLYQVLSYKGDFFSLIIILP- 253  
 DB 179 ATKDAPFLRNKDKSKTVK--MMYQKKFPFGIKK--LKRVLELPYQCKDLSWILLPD 234  
 QY 254 ---AEGMDIEVEKLIITAQOILKWL--SEMOEVEEISLPRFKVEQKVDVFXDVLVSLNIT 308  
 DB 235 STIEDSTGLRKIEQHLTLEKLEWTKPDNLELLEVNHLPRFLEESYDLNAPLARLGQV 294  
 QY 309 EIPSGCDLSGITDSSEVVSQVTKVFEINEDGSEATST-GIHIPVMSLAQSQFIA 367  
 DB 295 DLFGSRADLTGMSAEDLFISKVHKSFVEVNEEGTAAATXGIADV-FAMLMPEEDFIA 353  
 QY 368 NHHPFLFMKHNPTESILFMGRVTNP 392  
 DB 354 DIFPFFIRHNPSNIFLGLRSSP 378

## RESULT 15

A37274

Glia-derived nexin I precursor, splice form beta - human  
 N;Alternate names: glia-derived neurite promoting factor; proteinase inhibitor 7; prote  
 N;Contains: glia-derived nexin I precursor, splice form alpha  
 C:Species: Homo sapiens (man)  
 C:Date: 31-Dec-1991 #sequence\_revision 31-Dec-1991 #text\_change 09-Jul-2004  
 C:Accession: A37274; J00010; A27496; A26061; A24051  
 R:McGrogan, M.; Kennedy, J.; Li, M.P.; Hsu, C.; Scott, R.W.; Simonsen, C.C.; Baker, J.B  
 Bio/Technology 6, 172-177, 1988  
 A:Title: Molecular cloning and expression of two forms of human protease nexin I.  
 A:Reference number: J00010  
 A:Accession: A37274  
 A:Molecule type: mRNA  
 A:Residues: 1-398 <MCG1>  
 A:Cross-references: UNIPROT:P07093  
 A:Experimental source: splice form beta  
 A:Accession: J00010  
 A:Molecule type: mRNA  
 A:Residues: 1-328,'R',331-398 <MCG2>  
 A:Experimental source: splice form alpha  
 R:Sommer, J.; Gloor, S.M.; Rovelli, G.F.; Hofsteenge, J.; Nick, H.; Meier, R.; Monard, J.  
 Biochemistry 26, 6407-6410, 1987  
 A:Title: cDNA sequence coding for a rat glia-derived nexin and its homology to members  
 A:Reference number: A90519; MUID:88107544; PMID:3427015  
 A:Accession: A27496  
 A:Molecule type: mRNA  
 A:Residues: 1-328,'R',331-398 <SOM>  
 A:Cross-references: GB:M17783; NID:g183063; PIDN:AAA35883.1; PID:g183064  
 R:Gloor, S.; Odink, K.; Guenther, J.; Nick, H.; Monard, D.  
 Cell 47, 687-693, 1986  
 A:Title: A glia-derived neurite promoting factor with protease inhibitory activity belo  
 A:Reference number: A26061; MUID:87051740; PMID:2877744  
 A:Accession: A26061  
 A:Molecule type: protein  
 A:Residues: 1-259,'S',261-398 <GLO>  
 R:Scott, R.W.; Bergman, B.L.; Baij, A.; Hersch, R.T.; Rodriguez, H.; Jones, B.N.; Barr  
 J. Biol. Chem. 260, 7029-7034, 1985





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OM protein - protein search, using sw model

Run on: October 21, 2004, 06:33:26 / Search time 193 Seconds  
(without alignments)  
1168.637 Million cell updates/sec

Title: US-10-628-395-2  
Perfect score: 1987  
Sequence: 1 MOTIFLSLLLLFFGQASR.....FIMKINPTESILFMGRVTNP 392

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1825181 seqs, 575374646 residues

Total number of hits satisfying chosen parameters: 1825181

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Watch 0%  
Maximum Watch 100%  
Listing first 45 summaries

Database : Uniprot 02:.\*  
1: uniprot\_sprot.\*  
2: uniprot\_treml.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1972	99.2	405	1 SPI2 HUMAN	O75830 homo sapien
2	1524	76.7	405	1 SPI2 MOUSE	O9JX88 mus musculus
3	828.5	41.7	410	2 O6GUT7	O6G1T7 xenopus lae
4	791.5	39.8	410	1 NEUS HUMAN	O95574 homo sapien
5	788.5	39.7	410	1 NEUS_CHICK	O30935 gallus gall
6	762.5	38.4	410	1 NEUS_RAT	O9J1D2 rattus norv
7	762.5	38.4	410	2 AAH61536	AAH61536 rattus no
8	757.5	38.1	410	1 NEUS MOUSE	O35684 mus musculus
9	757.5	38.1	410	2 BAC27727	BAC27727 mus muscu
10	757.5	38.1	410	2 BAC34756	BAC34756 mus muscu
11	728	36.6	191	2 O63547	O63547 rattus norv
12	649	32.7	390	1 SCC3 HUMAN	P29508 homo sapien
13	649	32.7	390	2 AAP35394	AAP35394 homo sapi
14	647	32.6	390	2 O86W04	O86W04 homo sapien
15	640	32.2	390	2 O81X13	O81X13 homo sapien
16	636	32.0	390	1 SCC2 HUMAN	P48594 homo sapien
17	634	31.9	407	2 O6H007	O6H007 branchiosto
18	627	31.6	390	2 O86W05	O86W05 homo sapien
19	623	31.4	390	2 O86W03	O86W03 homo sapien
20	618.5	31.1	369	2 O9BYF7	O9BYF7 homo sapien
21	615.5	31.0	387	2 O8BHL1	O8BHL1 mus musculus
22	614.5	30.9	387	2 O6UKZ2	O6UKZ2 mus musculus
23	614.5	30.9	387	2 O9D105	O9D105 mus musculus
24	614.5	30.9	387	2 AAR89288	AAR89288 mus muscu
25	611.5	30.8	379	2 O9D154	O9D154 m mus muscu
26	611	30.7	384	2 O6TGU1	O6TGU1 brachydanio
27	611	30.7	384	2 AAG97848	AAG97848 brachydano
28	609.5	30.7	379	2 O8BK60	O8BK60 mus musculus
29	609.5	30.7	379	2 O9D758	O9D758 mus musculus
30	608.5	30.6	387	2 O8BG86	O8BG86 mus musculus
31	608.5	30.6	387	2 AAH63756	AAH63756 mus muscu

RESULT 1				
SPI2_HUMAN				
ID	SPI2_HUMAN	STANDARD;	PRT;	405 AA.
AC	O75830;			
DT	28-FEB-2003 (Rel. 41, Created)			
DT	28-FEB-2003 (Rel. 41, Last sequence update)			
DT	05-JUL-2004 (Rel. 44, Last annotation update)			
DE	Serpin I2 precursor (Myoepithelium-derived serine protease inhibitor)			
DE	(Pancpin) (Protease inhibitor 14) (TSA2004).			
GN	Name=SERPINI2; Synonyms=PI14, MEPI;			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=98287625; PubMed=9624529;			
RA	Ozaki K., Nagata M., Suzuki M., Fujiwara T., Miyoshi Y., Ishikawa O.,			
RA	Ohigashi H., Imakoa S., Takahashi E., Nakamura Y.;			
RT	"Isolation and characterization of a novel human pancreas-specific			
RT	pancpin, that is down-regulated in pancreatic cancer cells.,"			
RL	Genes Chromosomes Cancer 22:173-185(1998).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=99199247; PubMed=10097100;			
RA	Xiao G., Liu Y.E., Gentz R., Sang Q.A., Ni J., Goldberg I.D.,			
RA	Shi Y.E.;			
RT	"Suppression of breast cancer growth and metastasis by a serpin			
RT	myoepithelium-derived serine proteinase inhibitor expressed in the			
RT	mammary myoepithelial cells.,"			
RL	Proc. Natl. Acad. Sci. U.S.A. 96:3700-3705(1999).			
RN	[3]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=Pancreas, and Spleen;			
RX	MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;			
RA	Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,			
RA	Klausner R.D., Collins F.S., Wagner L., Sherman C.M., Schuler G.D.,			
RA	Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,			
RA	Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,			
RA	Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,			
RA	Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,			
RA	Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,			
RA	Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,			
RA	Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,			
RA	Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,			
RA	Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,			
RA	Pahey J., Helton E., Kettaman M., Madan A., Rodrigues S., Sanchez A.,			
RA	Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,			
RA	Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,			
RA	Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,			
RA	Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,			
RA	Schmerch A., Schein J.E., Jones S.J.M., Marra M.A.;			
RT	"Generation and initial analysis of more than 15,000 full-length human			
RT	and mouse cDNA sequences.,"			

O02739 bos taurus  
Q92922 mus musculus  
O08804 mus musculus  
AAH61050 mus muscu  
O96p63 homo sapien  
O722v7 homo sapien  
P35237 homo sapien  
AAH69596 homo sapi  
Q96p35 homo sapien  
P01044 gallus gall  
Q69u40 rattus norv  
AAH60594 rattus no  
Q6uk20 mus musculus  
AAH89290 mus muscu

## ALIGNMENTS

```

RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC -!- SUBCELLULAR LOCATION: Secreted (Probable).
CC -!- TISSUE SPECIFICITY: Expressed in pancreas and adipose tissues.
CC -!- SIMILARITY: Belongs to the serpin family.
CC -----
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CC -----
DR EMBL; AB006423; BAA33766.1; -.
DR EMBL; AF130470; AAD34723.1; -.
DR EMBL; BC027859; AAD27859.1; -.
DR HSP; P05120; IJRR.
DR Genew; HGNC:8945; SERPINI2.
DR MIM; 605587; -.
DR GO; GO:0004867; F:serine-type endopeptidase inhibitor activity; TAS.
DR GO; GO:0006928; P:cell motility; TAS.
DR InterPro; IPR000215; Prot_inh_serpin.
DR Pfam; PF00079; Serpin; 1.
DR SMART; SM00093; SERPIN; 1.
DR PROSITE; PS00284; SERPIN; 1.
KW Glycoprotein; Serine protease inhibitor; Serpin; Signal.
FT SIGNAL 1 18
FT CHAIN 19 405
FT SITE 357 358
FT CARBOHYD 202 202
FT CARBOHYD 207 207
FT CARBOHYD 306 306
FT CARBOHYD 405 AA; 46145 MW; 5BA18C60E4FDE9A4 CRC64;
SQ SEQUENCE 405 AA; 46145 MW; 5BA18C60E4FDE9A4 CRC64;

Query Match 99.2%; Score 1972; DB 1; Length 405;
Best Local Similarity 99.5%; Pred. No. 5.6e-125;
Matches 390; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MDIFLWLLLLFFGQASQCSQKNTFAVDLYQEVLSHKDNIIFSPGLITVLEWVQ 60
Db 1 MDIFLWLLLLFFGQASQCSQKNTFAVDLYQEVLSHKDNIIFSPGLITVLEWVQ 60
QY 61 LGAKGAQQQIROTLLKQETSAGEEFLVLKSPCSAISEKKQEFNFANALYLQEGFTVK 120
Db 61 LGAKGAQQQIROTLLKQETSAGEEFLVLKSPCSAISEKKQEFNFANALYLQEGFTVK 120
QY 121 EQLHGNKEFFQSAIKLVDFQDAKACAEIMSTWERKTDGKIKDMPSEEFGLTFLVLV 180
Db 121 EQLHGNKEFFQSAIKLVDFQDAKACAEIMSTWERKTDGKIKDMPSEEFGLTFLVLV 180
QY 181 NAIYFGDKWKQKFKEDTQILNFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240
Db 181 NAIYFGDKWKQKFKEDTQILNFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240
QY 241 YKGFESLIILPAEGMDIEVEKLIQAQIILKWLSEMOEEVEVLSLPRFKVEQKVDKFD 300
Db 241 YKGFESLIILPAEGMDIEVEKLIQAQIILKWLSEMOEEVEVLSLPRFKVEQKVDKFD 300
QY 301 VLYSLNITIFSGGCDLSGITSSEVYVSVQVTKVFFELNEDGSEAASTGHIPIVMSL 360
Db 301 VLYSLNITIFSGGCDLSGITSSEVYVSVQVTKVFFELNEDGSEAASTGHIPIVMSL 360
QY 361 AQSQFIANHPFLFMKHNPTESILFNGRVNTP 392
Db 361 AQSQFIANHPFLFMKHNPTESILFNGRVNTP 392

RESULT 2
SP12_MOUSE
ID SP12_MOUSE STANDARD; PRT; 405 AA.
AC Q9JK88; Q9J823; Q9D955;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)

```

```

DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Serpin I2 precursor (Serine protease inhibitor 14).
GN Name=SerpinI2; Synonyms=Sp14;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eumetazoa; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
[1]
RP SEQUENCE FROM N.A.
RC TISSUE=Pancreas;
RA Chang W.S., Lin C.C., Wu C.W.;
RT "Isolation and characterization of mouse pancreas-specific serpin
gene.";
RL Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.
[2]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Pancreas;
EX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;
RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,
RA Nikaide I., Osato N., Saito R., Suzuki H., Yamana I., Kiyosawa H.,
RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,
RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,
RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,
RA Blake J.A., Bradt D., Brusic V., Choithia C., Corbani L.E., Cousins S.,
RA Dalla E., Dragani T.A., Fletcher C.P., Forrest A., Frazer K.S.,
RA Gasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.S.,
RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,
RA Kanai A., Kawai H., Kawasawa Y., Kedzierski R.M., King B.L.,
RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,
RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,
RA Nagashima T., Numa K., Okido T., Pavan W.J., Pertea G., Pesole G.,
RA Petrowsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,
RA Ravasi L., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,
RA Sandelin A., Schneider C., Sempie C.A., Setou M., Shimada K.,
RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,
RA Verardo R., Wagner L., Wohlschlag C., Wang Y., Watanabe Y., Wells C.,
RA Wilming L.G., Wyshaw-Boris A., Yanagisawa M., Yang I., Yang L.,
RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,
RA Miyazaki A., Sakai K., Sakai K., Shibata K., Shinagawa A.,
RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
RA Birney E., Hayashizaki Y.;
RT "Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).
CC -!- SUBCELLULAR LOCATION: Secreted (Probable).
CC -!- TISSUE SPECIFICITY: Expressed in pancreas.
CC -!- SIMILARITY: Belongs to the serpin family.
CC -----
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CC -----
DR EMBL; AF251276; AAP65821.1; -.
DR EMBL; AK007347; BAB24976.1; -.
DR EMBL; AK007510; BAB25079.1; -.
DR HSP; P01008; IATH.
DR MGD; MGI:1915181; SerpinI2.
DR InterPro; IPR000215; Prot_inh_serpin.
DR Pfam; PF00079; Serpin; 1.
DR PROSITE; PS00284; SERPIN; 1.
KW Glycoprotein; Serine protease inhibitor; Serpin; Signal.
FT SIGNAL 1 18
FT CHAIN 19 405
FT SITE 357 358
FT CARBOHYD 306 306
FT CARBOHYD 405 AA; 46145 MW; 5BA18C60E4FDE9A4 CRC64;
SQ SEQUENCE 405 AA; 46145 MW; 5BA18C60E4FDE9A4 CRC64;

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FT CONFLICT 195 195 K -> T (in Ref. 2; BAB24976).
FT CONFLICT 207 207 D -> S (in Ref. 2; BAB24976).
FT CONFLICT 212 218 KVPMMKA -> RVPDEV (in Ref. 2; BAB24976).
FT CONFLICT 246 246 F -> Y (in Ref. 2; BAB24976).
SQ SEQUENCE 405 AA; 45775 MW; 04DF38BE8545DFA8 CRC64;

Query Match 76.7%; Score 1524; DB 1; Length 405;
Best Local Similarity 75.5%; Pred. No. 16-94;
Matches 296; Conservative 40; Mismatches 56; Indels 0; Gaps 0;

QY 1 MDPIFWSLLFFGSOARCSAQNTEFAVDLYQVSLSHKDNIFSPGLGTLVLEVMQ 60
DB 1 MKWTILWSFLLPFGSGTSTRATQKIADFAVDLYKAISLHKNNIFSPGLGTLGVMQ 60

QY 61 LGAKGAQAOIQRLTKQOETSAGEEFLVLKSCSAISEKKQBFTEFNALALYQSGFTVK 120
DB 61 LGAKGAQAOIQRLTKQOETSAGEEFLVLKSCSAISEKKQBFTEFNALALYQSGFTVK 120

QY 121 EQVLHGNKEFFQSAIKLVDFQDAKCAEMISTWERTGDKIKDMPSEGEFGLRLVLV 180
DB 121 ETVLHGNKEFFQSAIKLVDFQDAKCAEMISTWERTGDKIKDMPSEGEFGLRLVLV 180

QY 181 NAIYFGDKWKQKFRKEDTOLINFTKNGSTVKIPMKALLRTKYGVFSSSLNYQVLELS 240
DB 181 NAIYFGDKWKQKFRKEDTOLINFTKNGSTVKIPMKALLRTKYGVFSSSLNYQVLELS 240

QY 241 YKDEFSLLIILPAEGNDIEVEKLITACQILKMLSEMGEVEISLPRFKVQKVDKFD 300
DB 241 YKDEFSLLIILPAEGNDIEVEKLITACQILKMLSEMGEVEISLPRFKVQKVDKFD 300

QY 301 VLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFFNEINDEGSEAAATSGIHIPVMSL 360
DB 301 VLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFFNEINDEGSEAAATSGIHIPVMSL 360

QY 361 AQSOFTANHPFLFMKHNPTESILFMGRVTNP 392
DB 361 AQSOFTANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 3
QGLT7 PRELIMINARY; DB 1; Length 405;
ID MEDLINE=22388257; Pubmed=12477932;
AC QGLT7;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Hypothetical protein.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=22388257; Pubmed=12477932;
RA Klausner R.L., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marudina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bobak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Villalón D.K., Wozny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettner M., Madan A., Rodriguez S., Sanchez A.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smallos D.E., Schnerch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
```

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RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16999-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=22341132; Pubmed=12454917;
RA Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
RA Richardson P.;
RT "Genetic and genomic tools for Xenopus research: The NIH Xenopus
RT initiative.";
RL Dev. Dyn. 225:384-391(2002).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX Klein S., Strausberg R.;
RA submitted (JUN-2004) to the EMBL/GenBank/DBJ databases.
CC -!- SIMILARITY: Belongs to the serpin family.
DR EMBL; BC074366; AAH74366.1; -.
DR InterPro; IPR000215; Prot_inh_serpin.
DR Pfam; PF00079; Serpin; 1.
DR SMART; SM00093; SERPIN; 1.
DR PROSITE; PS00284; SERPIN; 1.
DR Hypothetical protein; Protease inhibitor; Serine protease inhibitor;
KW Serpin.
SQ SEQUENCE 410 AA; 46392 MW; 1C53BAF8D3F72480 CRC64;

Query Match 41.7%; Score 828.5; DB 2; Length 410;
Best Local Similarity 42.0%; Pred. No. 9.5e-48;
Matches 166; Conservative 95; Mismatches 123; Indels 11; Gaps 4;

QY 6 LMSLLL---LFGSOARCSAQNTEFAVDLYQVVSLSHKD-NIIFSPGLGTLVLEVMQ 61
DB 6 LLSLLVMQALVFGTSVHDAV---NEFSIKVYHELKATKEDENIFSPLSAIALGMVEL 62

QY 62 GAKGAQAOIQRLTKQOETSAGEEFLVLKSCSAISEKKQBFTEFNALALYQSGFTVKE 121
DB 63 GARGSSLEIRHVLGYDKLNGEESFLDKLSSMTAQEKHYVLSIANSLYQNGFHISD 122

QY 122 QYLHGNKEFFQSAIKLVDFQDAKCAEMISTWERTGDKIKDMPSEGEFGLRLVLV 181
DB 123 KFIQLMKKYKAEVENVDFSGSAVASHINLWVENHTNRIIDLFTADDNNLTKLV 182

QY 182 AIYFGDKWKQKFRKEDTOLINFTKNGSTVKIPMKALLRTKYGVFSSSLN---YQVL 237
DB 183 AIYFGDKWKQKFRKEDTOLINFTKNGSTVKIPMKALLRTKYGVFSSSLN---YQVL 242

QY 238 ELSYKGEFDFSLIILPAEGMDIEVEKLITACQILKMLSEMGEVEISLPRFKVQKVD 297
DB 243 ELPIYGEISLIIILSRGEVPLATIEPLKAPLEEWANSVKQKQVEVLPFRKVEEVN 302

QY 298 FKDVLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFFNEINDEGSEAAATSGIHIPV 357
DB 303 LKXILMLRLGITKIFSGEADLSAISDSKDLFVAKVVKHKSFLVNEEGEAAASGMIANSR 362

QY 358 NSLAQSOFTANHPFLFMKHNPTESILFMGRVTNP 392
DB 363 MAVLYPQVIVDHPFFFLIRNRKTKGSLVFMGRVMP 397

RESULT 4
NEUS_HUMAN STANDARD; DB 1; Length 410 AA;
ID NEUS_HUMAN
AC Q99574;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Neuroserpin precursor (Protease inhibitor 12).
GN Name-SERPIN1; Synonyms=Pi12;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
```

DR	EMBL; BC018043; AAH18043.1; -.
DR	HSSP; O35684; IJJO.
DR	Genew; HGNC:8943; SERPIN1.
DR	MIM; 602445; -.
DR	MIM; 604218; -.
DR	GO; GO:0004867; F serine-type endopeptidase inhibitor activity; TAS.
DR	GO; GO:0007417; P central nervous system development; TAS.
DR	GO; GO:0007422; P peripheral nervous system development; TAS.
DR	InterPro; IPR000215; Prot inh_serpin.
DR	Pfam; PF000079; Serpin; 1._inh_serpin.
DR	SMART; SMART00093; SERPIN; 1.
DR	PROSITE; PS00284; SERPIN; 1.
KW	Disease mutation; Glycoprotein; Serine protease inhibitor; Serpin;
KW	Signal.
FT	SIGNAL
FT	CHAIN
FT	SITE
FT	CARBOHYD
FT	CARBOHYD
FT	CARBOHYD
FT	VARIANT
FT	VARIANT
FT	CONFLICT
FT	CONFLICT
SEQ	SEQUENCE

Query Match 39.8%; Score 791.5; DB 1; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 3e-45;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2

QY	6	LNSLLLLPFGSQASCSAQKTEPAVDLVQEVLSHKD-NIIFSPPLGITVLVLEKVQLGAK	64
DB	6	LFSLVLQSVMATGATFPBEAADLSVMNMYNELRATGEDENILFSPSLALANGMWELGAQ	65
QY	65	GKAQQOIRQLTKQETSAGEFLVLKGFCSAISKKOEFTFNLANALYLQEGFTVKEOYL	124
DB	66	GSTQEIRHSMGYSDLKNGEFFSKPEFSNMVTAKESQYVMKIANSILFVQNGFHVNEEFL	125
QY	125	HGNKEFFSOAIKLVDFODAKCAEVIPTWVERKTGKIKNMFGSEFGPIITRLVLNVAY	184
DB	126	QNMKYFYFAAVANHVDFSQNVAAVANYNKVENNTNNLVKDLVSPPRDFDAATYIALINAVY	185
QY	185	RKGDMMKQFKREDTOLINFTKKSGTVKIPMKALLRTKYGYESSELN---YVLELS	240
DB	186	FPGNWKSQFRRENTFTSFTKDDSEVOIPPMYQQGFYGEPSDGSNEAGGYQVLEIP	245
QY	241	YKGEDFSLLIIILPAGMDIEVEKLITAQAQTLKWLSEMQUEEVEISLRFKVEQKDFDK	300
DB	246	YEGDEISMVLRSQREVPLATLEPLVAQLVEEWANSVKQKVEVYLPRFTVBOEDLKD	305
QY	301	VLYSLNIETIEISGGCDLSGIITDSDEVVSQYQVKVFEEINEDGEAATSTGIHIPVMSL	360
DB	306	VLKALGITEIFIKANULTGUSDNKEIFLSKAIHKSFLFEVNEEGSEAAVSGMTAISRMAY	365
QY	361	AOSQFIANHPPFLFMKHNPTEISILFMGRVTNP	392
DB	366	LYPQIVVDHPFFFLIRNRRTGILLFMGRVMP	397

RESULT 5  
 ID NEUS\_CHICK STANDARD; PRT; 410 AA.  
 AC Q9035;  
 DT 15-JUL-1998 (Rel. 36, Created)  
 DT 15-JUL-1998 (Rel. 36, Last sequence update)  
 DE 05-JUL-2004 (Rel. 44, Last annotation update)  
 DE Neuroserpin precursor (Axenin-2).  
 GN Name=SERPIN1; Synonyms=pil2;  
 OS Gallus gallus (Chicken).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Archosauria; Aves; Neornathae; Galliformes; Phasianidae; Phasianinae.







RP GENE STRUCTURE  
RX MEDLINE=98391008; PubMed=9729122;  
RA Berger P., Kozlov S.V., Krueger S.R., Sonderegger P.;  
RT "Structure of the mouse gene for the serine protease inhibitor  
neuroserpin (PIL2).";  
RL Gene 214:25-33(1998).  
RN [4]  
RP CHARACTERIZATION.  
RX MEDLINE=98113198; PubMed=9442076;  
RA Osterwalder T., Cinelli P., Baici A., Pennella A., Krueger S.R.,  
Schrumpf S.P., Meins M., Sonderegger P.;  
RT "The axonally secreted serine proteinase inhibitor, neuroserpin,  
inhibits plasminogen activators and plasmin but not thrombin.";  
RL J. Biol. Chem. 273:2312-2321(1998).  
RN [5]  
RP X-RAY CRYSTALLOGRAPHY (3.06 ANGSTROMS).  
RX MEDLINE=2141625; PubMed=1157034;  
RA Briand C., Kozlov S.V., Sonderegger P., Gruetter M.G.;  
RT "Crystal structure of neuroserpin: a neuronal serpin involved in a  
conformational disease.";  
RL FEBS Lett. 505:18-22(2001).  
CC -!- FUNCTION: Serine protease inhibitor that inhibits plasminogen  
activators and plasmin but not thrombin. May be involved in the  
formation or reorganization of synaptic connections as well as for  
synaptic plasticity in the adult nervous system. May protect  
neurons from cell damage by tissue-type plasminogen activator.  
CC -!- SUBCELLULAR LOCATION: Secreted.  
CC -!- TISSUE SPECIFICITY: During embryonic development mostly expressed  
in CNS. In adult expressed in brain and much less in spinal cord,  
heart, kidney and testis.  
CC -!- SIMILARITY: Belongs to the serpin family.  
CC -----  
CC This SWISS-PROT entry is copyright. It is produced through a collaboration  
between the Swiss Institute of Bioinformatics and the EMBL outstation -  
the European Bioinformatics Institute. There are no restrictions on its  
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or send an email to [license@isb-sib.ch](mailto:license@isb-sib.ch)).  
CC -----  
CC EMBL: AJ001700; CAA04939.1; .  
CC EMBL: BC006776; AA06776.1; .  
CC PDB: 1JJO; X-ray; A/B=25-64, C/D=101-361, E/F=367-399.  
CC MGD: MGI:1194506; Serpinil.  
CC InterPro: IPR000215; Prot\_inh\_serpin.  
CC Pfam: PF00079; Serpin; 1.  
CC SMART: SM00093; SERPIN; 1.  
CC PROSITE: PS00284; SERPIN; 1.  
CC 3D-structure; Glycoprotein; Serine protease inhibitor; Serpin; Signal.  
FT SIGNAL 1 16 Potential.  
FT CHAIN 17 410 Neuroserpin.  
FT SITE 362 363 Reactive bond (By similarity).  
FT CARBOHYD 157 157 N-linked (GlcNAc...) (potential).  
FT CARBOHYD 321 321 N-linked (GlcNAc...) (potential).  
FT CARBOHYD 401 401 N-linked (GlcNAc...) (potential).  
FT CONFLICT 5 5 E -> G (in Ref. 2).  
FT HELIX 26 33  
FT TURN 34 38  
FT STRAND 46 48  
FT HELIX 50 60  
FT TURN 61 62  
FT STRAND 105 105  
FT STRAND 108 115  
FT HELIX 122 131  
FT TURN 132 132  
FT STRAND 136 139  
FT TURN 141 142  
FT HELIX 144 158  
FT TURN 160 161  
FT TURN 169 171  
FT TURN 174 175  
FT TURN 178 190  
FT STRAND 191 192  
TURN 196 197  
STRAND 200 204  
TURN 207 208  
STRAND 212 220  
STRAND 224 229  
TURN 234 235  
STRAND 238 246  
TURN 249 250  
STRAND 251 257  
TURN 260 261  
HELEX 264 266  
TURN 267 270  
HELEX 273 277  
TURN 278 278  
HELEX 279 281  
TURN 282 282  
STRAND 284 285  
STRAND 289 293  
STRAND 296 299  
HELEX 303 308  
TURN 309 310  
STRAND 335 343  
STRAND 348 358  
STRAND 369 371  
STRAND 376 382  
TURN 383 385  
STRAND 388 394  
SEQUENCE 410 AA; 46347 MW; DA3AP6F5195EBB7C CRC64;  
Query Match 38.1%; Score 757.5; DB 1; Length 410;  
Best Local Similarity 39.9%; Pred. No. 5.9e-43;  
Matches 148; Conservative 93; Mismatches 125; Indels 5; Gaps 2;  
QY 27 TEFAVDLVQEVSLSHKD-NIIFSPILGITLVLEMVOLGKAKQAQQIROTLLAQQETSAGEE 85  
DB 27 TEWSVMYNYHLRGTDGDEENILFSPJSTALANGMELGAQGGSTRKEIRHSVMGVEGLKGEE 86  
QY 86 FLVLKSFCSAISSEKQOEFTFLANALYLQEGFTVKEQYLHGNKEFFQSAIKLVDFQDARA 145  
DB 87 FSLDFDFSNMASEENQIVMKLANSLFVQNGFHVNEEFLQMKMYFAEVAHVDFSQNVA 146  
QY 146 CAEMISTVVERKTDGKIKNMFSGEGFGLTRVLVNLALYFKGDMKQKKEKEDTQLINETK 205  
DB 147 VANSINKWVENYTNGLKDLVSPEDFGVTNLALINAVYFKGNWKSQRPENTRTFTSK 206  
QY 206 KNGSTVKIPMKALLRTKYGVFSESLN---YQVLELSYKGFDEFLIIIPAEQMDIEE 261  
DB 207 DSEVQIPMMYQQGEFFYGFESDGSNAGGIYQVLEIPEYGEDEISWMLALSREQEVLAT 266  
QY 262 VEKLITAQQILKWLSEMQEEVEISLPRKVEQKVDKDLVLSLNIITIFSGGCDLSGIT 321  
DB 267 LEPLLKAQLIEWANSVKQKVEVYLPRFTVQEQIDKDLKALGVTEIFIKDANLTAMS 326  
QY 322 DSEVTVSVQTKVFPFNEEDGSEATSGIHIPVMSLAQSQFIANHPFLFMKHNPT 381  
DB 327 DKKEFLSKAVHKSCIEVNEEGSEAAASGMTAISRMVLYPQVIVDHFVLIENRKSG 386  
QY 382 SILFMGRVTNP 392  
DB 387 IILFMGRVNP 397

RESULT 9  
BAC27727  
ID BAC27727 PRELIMINARY; PRT; 410 AA.  
AC BAC27727; (TrEMBLrel. 27, Created)  
DT 14-APR-2004 (TrEMBLrel. 27, Last sequence update)  
DT 14-APR-2004 (TrEMBLrel. 27, Last annotation update)  
DE Adult male olfactory brain cDNA, RIKEN full-length enriched library,  
clone:6430403B13 product:serine (or cysteine) proteinase inhibitor,  
clade I (neuroserpin), member 1, full insert sequence.  
OS Mus musculus (Mouse).







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188 DWKQKFKEDTQLTNFTKNGSTVKIPMKALLRTKYGYSESSLNQVLELSYKGDFFS 247
      ::::: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
185 QWEKKFKEDTKSEKFWPNKNTKYSIOMROY--TSFHFASLEDVQAKVLEIPIYKGDLS 242

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QY 248 LIILPAEGMDIEBEVKLITAOQILKW--LSEMQEEVEISLPFRKVEQKQDFKDVLYSL 305
Db 243 MIVLLPNEIDGLQKLEKLTAEKLMWTSQNVRETRVDLHLPRFKVEESYDLKDTLRTM 302
QY 306 NITEIFSGGCDLSGTDSSVYVSVQTKVFFINEEDGSEAAATSTGI---HIPVMSLA 361
Db 303 GMVDIFNGDADLSGMTSGRLVSLGVLHKAFAFVETEGEAAAAATAVVGFGSSP---TST 359
QY 362 QSQPIAHNPFLFMKNPTESILRMGRVTNP 392
Db 360 NEEFHCNHPFLFFIRQNKNTSILFYGRFSSP 390

RESULT 14
Q86W04 PRELIMINARY; PRT; 390 AA.
AC Q86W04, 2003 (TrEMBLrel. 24, Created)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Squamous cell carcinoma antigen 1.
GN Name=SERPINB3;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=22982588; PubMed=12975381;
RA Moore P.L., Ong S., Harrison T.J.;
RT "Binding of HEV to cells is mediated by SCCA1 but does not require the
RT reactive site loop.";
RL J. Biol. Chem. 278:46709-46717(2003).
CC -!- SIMILARITY: Belongs to the serpin family.
DR EMBL; AJ515706; CAD56658.1; -.
DR HSP; P01008; 1ATH.
DR GO; GO:0004867; F:serine-type endopeptidase inhibitor activity; IEA.
DR InterPro; IPR00215; Prot inh_serpin.
DR Pfam; PF00079; Serpin; 1.
DR SMART; SM00093; SERPIN; 1.
DR PROSITE; PS00284; SERPIN; 1.
KW Protease inhibitor; Serine protease inhibitor; Serpin.
SQ SEQUENCE 390 AA; 44612 MW; A56B24CA40CA1C76 CRC64;

Query Match 32.6%; Score 647; DB 2; Length 390;
Best Local Similarity 35.3%; Pred. No. 1.6e-35;
Matches 137; Conservative 89; Mismatches 142; Indels 20; Gaps 5;

QY 23 AQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMVOLGAKGAKQAQOIQTILKQETS- 81
Db 5 SEANTKFMFDLQOQFRKSKENNIFYSPTSITSLGMLVLLGAKNTAQOIKKVLHFDQVTE 64
QY 82 -----AGEEFLVKSFCSAISSEKKQEFNFANALYLQEGFTVKEQYLHGK 128
Db 65 NTTGKAATYHVDNRSGNVHHQFKLLTEFNKSTDAYELKIANKLFGKTYLFLQEYLDIAK 124
QY 129 EFFQSAIKLVDPQDA-KACAEMISTWVERKTDGKIDMFSGEEFGPLTRLVLVNAIYFKG 187
Db 125 KFYQTSVSVDPANAPESRKKINSWESQTNKIKNLIPEGNIGSNTTLVLVNAIYFKG 184
QY 188 DWKQKFRKEDTQLIINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELSYKGDPS 247
Db 185 RWKCFKNKEDTKEEKFPWPNKNTYKSIQMRQY--TSFHASLEDVQAKVLEIPYKGDLS 242
QY 248 LIILPAEGMDIEBEVKLITAOQILKW--LSEMQEEVEISLPFRKVEQKQDFKDVLYSL 305
Db 243 MIVLLPNEIDGLQKLEKLTAEKLMWTSQNVRETRVDLHLPRFKVEESYDLKDTLRTM 302
QY 306 NITEIFSGGCDLSGTDSSVYVSVQTKVFFINEEDGSEAAATSTGI---HIPVMSLA 361
Db 303 GMVDIFNGDADLSGMTSGRLVSLGVLHKAFAFVETEGEAAAAATAVVGFGSSP 362
QY 365 FIANHNPFLFMKNPTESILFMGRVTNP 392
Db 363 FHCNHPFLFFIRQNKNTSILFYGRFSSP 390
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RESULT 15
Q8IX13 PRELIMINARY; PRT; 390 AA.
AC Q8IX13;
DT 01-MAR-2003 (TrEMBLrel. 23, Created)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Squamous cell carcinoma antigen 1.
GN Name=SERPINB3;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=22982588; PubMed=12975381;
RA Moore P.L., Ong S., Harrison T.J.;
RT "Binding of HEV to cells is mediated by SCCA1 but does not require the
RT reactive site loop.";
RL J. Biol. Chem. 278:46709-46717(2003).
CC -!- SIMILARITY: Belongs to the serpin family.
DR EMBL; AJ515706; CAD56658.1; -.
DR HSP; P01008; 1ATH.
DR GO; GO:0004867; F:serine-type endopeptidase inhibitor activity; IEA.
DR InterPro; IPR00215; Prot inh_serpin.
DR Pfam; PF00079; Serpin; 1.
DR SMART; SM00093; SERPIN; 1.
DR PROSITE; PS00284; SERPIN; 1.
KW Protease inhibitor; Serine protease inhibitor; Serpin.
SQ SEQUENCE 390 AA; 44504 MW; E9D56D2D786C9E24 CRC64;

Query Match 32.2%; Score 640; DB 2; Length 390;
Best Local Similarity 34.9%; Pred. No. 4.8e-35;
Matches 137; Conservative 89; Mismatches 137; Indels 30; Gaps 6;

QY 23 AQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMVOLGAKGAKQAQOIQTILKQETS- 81
Db 5 SEANTKFMFDLQOQFRKSKENNIFYSPTSITSLGMLVLLGAKNTAQOIKKVLHFDQVTE 64
QY 82 -----AGEEFLVKSFCSAISSEKKQEFNFANALYLQEGFTVKEQYLHGK 128
Db 65 NTTGKAATYHVDNRSGNVHHQFKLLTEFNKSTDAYELKIANKLFGKTYLFLQEYLDIAK 124
QY 129 EFFQSAIKLVDPQDA-KACAEMISTWVERKTDGKIDMFSGEEFGPLTRLVLVNAIYFKG 187
Db 125 KFYQTSVSVDPANAPESRKKINSWESQTNKIKNLIPEGNIGSNTTLVLVNAIYFKG 184
QY 188 DWKQKFRKEDTQLIINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELSYKGDPS 247
Db 185 QWEKFNKEDTKEEKFPWPNKNTYKSIQMRQY--TSFHASLEDVQAKVLEIPYKGDLS 242
QY 248 LIILPAEGMDIEBEVKLITAOQILKW--LSEMQEEVEISLPFRKVEQKQDFKDVLYSL 305
Db 243 MIVLLPNEIDGLQKLEKLTAEKLMWTSQNVRETRVDLHLPRFKVEESYDLKDTLRTM 302
QY 306 NITEIFSGGCDLSGTDSSVYVSVQTKVFFINEEDGSEAAATSTGIHIPIVMSLAQS-- 363
Db 303 GMVDIFNGDADLSGMTSGRLVSLGVLHKAFAFVETEGEAAAAATAVVGFGSSP 357
QY 364 ----QFIANHNPFLFMKNPTESILFMGRVTNP 392
Db 358 STNEEFHCNHPFLFFIRQNKNTSILFYGRFSSP 390

Search completed: October 21, 2004, 06:45:30
Job time : 196 secs
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OM protein - protein search, using sw model

Run on: October 21, 2004, 06:33:26 ; Search time 71 Seconds  
(without alignments)  
1980.590 Million cell updates/sec

Title: US-10-628-395-2

Perfect score: 1987

Sequence: 1 MDTFLWSLLLLFPQSQR.....FMKHNPTESILFMGRVTNP 392

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2002273 seqs, 358729299 residues

Total number of hits satisfying chosen parameters: 2002273

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A\_Geneseq\_23Sep04:\*  
1: Geneseq1980s:\*  
2: Geneseq1990s:\*  
3: Geneseq2000s:\*  
4: Geneseq2001s:\*  
5: Geneseq2002s:\*  
6: Geneseq2003as:\*  
7: Geneseq2003bs:\*  
8: Geneseq2004s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1987	100.0	392	2	Aaw48391
2	1987	100.0	392	2	Aay04120
3	1987	100.0	392	5	Aae14266
4	1987	100.0	392	6	Abg72445
5	1987	100.0	392	8	Ado05045
6	1987	100.0	405	2	Aay04121
7	1987	100.0	405	5	Aae14267
8	1987	100.0	405	6	Abg72448
9	1987	100.0	405	8	Ado05056
10	1972	99.2	405	8	Adq19238
11	1969	99.0	405	2	Aay01601
12	1823.5	91.8	406	2	AAW06202
13	791.5	39.8	410	2	AAW60054
14	791.5	39.8	410	2	AAy31663
15	791.5	39.8	410	3	AAy67239
16	791.5	39.8	410	3	AAy58172
17	791.5	39.8	410	3	AAy19550
18	791.5	39.8	410	4	AAU00537
19	791.5	39.8	410	6	ABg76081
20	791.5	39.8	410	6	ABU56517
21	791.5	39.8	410	7	ADG47609
22	788.5	39.7	410	7	ADf28923
23	788.5	39.7	410	7	ADg47610
24	757.5	38.1	410	2	AAy31664
25	757.5	38.1	410	3	AAy58173

26	751	37.8	407	2	AAW08384	Aaw08384	Novel ser
27	687.5	34.6	356	4	AAW23714	AAW23714	Human EST
28	658	33.1	390	8	ADK39787	ADK39787	Human squ
29	656	33.0	390	2	AAW15241	AAW15241	Protiasta
30	651	32.8	390	6	ABB98808	ABB98808	SCCA1/SCC
31	649	32.7	390	2	AAy32077	AAy32077	Hepatitis
32	649	32.7	390	2	AAy25928	AAy25928	Human SCC
33	649	32.7	390	4	AAy72654	AAy72654	Human squ
34	649	32.7	390	6	ABB98810	ABB98810	SCCA1 pro
35	649	32.7	390	8	ADJ66516	ADJ66516	Squamous
36	649	32.7	390	8	ADK70439	ADK70439	Respirato
37	649	32.7	390	8	ADK39782	ADK39782	Human squ
38	649	32.7	390	8	ADM91772	ADM91772	Squamous
39	649	32.7	390	8	ADN04442	ADN04442	Antipsori
40	647	32.6	390	2	AAy32078	AAy32078	Hepatitis
41	646	32.5	390	2	AAZ25276	AAZ25276	SCC anti
42	639	32.2	390	6	ABB98670	ABB98670	SCCA1/SCC
43	636	32.0	390	2	AAy25927	AAy25927	Human SCC
44	636	32.0	390	4	AAy72655	AAy72655	Human squ
45	636	32.0	390	6	ABB98811	ABB98811	SCCA2 pro

#### ALIGNMENTS

RESULT 1

AAW48391  
ID AAW48391 standard; protein; 392 AA.

XX AC AAW48391;

XX DT 03-AUG-1998 (first entry)

XX DE Homo sapiens pancreas-derived plasminogen activator inhibitor.

XX KW pancreas-derived; plasminogen activator; inhibitor; PAPAI; diagnosis;

XX KW treatment; disorder; cancer; blood coagulation; viral infection;

XX KW pregnancy complications; preeclampsia; intrauterine growth retardation;

XX KW wound healing; tumour invasion; metastasis; leukaemia; lung; breast;

XX KW endometrial; ovarian; melanoma; gastrointestinal; pancreatic; colorectal;

XX KW coagulation; thrombi; arterial; venous; inflammation; antiviral; HIV-1;

XX KW HIV-2; hepatitis.

XX OS Homo sapiens.

XX FH Key Location/Qualifiers

FT Peptide 1..14

FT Protein /note= "leader sequence"

15..392

/label= mature PAPAI

WO9807735-A1.

26-FEB-1998.

16-AUG-1996; 96WO-US013283.

16-AUG-1996; 96WO-US013283.

(HUNA-) HUMAN GENOME SCI INC.

Ni J, Gentz RL, Ruben SM;

WPI, 1998-169083/15.

N-PSDB; AAV17829.

New isolated pancreas-derived plasminogen activator inhibitor - useful for developing products for diagnosis and treatment of disorders, e.g. cancers, blood coagulation or viral infections.

Claim 16; Fig 1; 88pp; English.

The sequence is that of pancreas-derived plasminogen activator inhibitor

CC (PAPAI). PAPAI can be used for treating conditions in which abnormal  
CC activity of the plasminogen activator (PA) system is implicated e.g.  
CC complications of pregnancy such as preeclampsia and intrauterine growth  
CC retardation, cancer and wound healing. Since plasminogen activator  
CC inhibitors (PAI) inhibit tumour cell invasion and metastasis, the  
CC products provide a method for treating or preventing tumour invasion and  
CC metastasis in cancers including leukaemia, lung cancer, breast cancer,  
CC endometrial and ovarian cancer, melanoma, and gastrointestinal cancers,  
CC including pancreatic cancer and colorectal cancer. In addition, since  
CC PAI's inhibit fibrinolysis, the products provide a method for treating or  
CC preventing coagulation disorders including arterial thrombi, venous  
CC thrombi, disseminated intravascular coagulation, and excessive bleeding  
CC caused by the administration of a pharmaceutical PA such as urokinase or  
CC tissue PA. Further, since PA's are effective antiviral agents, the  
CC products provide a method for treating or preventing infections caused by  
CC viruses including HIV-1, HIV-2 and hepatitis A, B, C, E, F, and G. The  
CC products can also be used for detection and diagnosis of the above  
CC disorders  
XX  
SQ Sequence 392 AA;

Query Match 100.0%; Score 1987; DB 2; Length 392;  
Best Local Similarity 100.0%; Pred. No. 5.8e-170; Indels 0; Gaps 0;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLLFFGSAQSCSAQKNTPEAVDLYQVSLSHKDNIIFSPGLGITLVLEWVQ 60  
Db 1 MDTIFLWSLLLLFFGSAQSCSAQKNTPEAVDLYQVSLSHKDNIIFSPGLGITLVLEWVQ 60  
QY 61 LGAGKAQAOQIROTLLKQOETSAGEEFLVLSKCSAISSEKKQFTFNLANALVLOSGFTVK 120  
Db 61 LGAGKAQAOQIROTLLKQOETSAGEEFLVLSKCSAISSEKKQFTFNLANALVLOSGFTVK 120  
QY 121 EQLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180  
Db 121 EQLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180  
QY 181 NAIYFGDKWKQKFRKEDTQIINFTKNGSTVKIPMKALLRTKYGFSSSLNYQVLELS 240  
Db 181 NAIYFGDKWKQKFRKEDTQIINFTKNGSTVKIPMKALLRTKYGFSSSLNYQVLELS 240  
QY 241 YKGFDESLIIILPAEGMDIEVEKLIPTAOILKWLSEMOEEVEISLPRFKVEQKVDKFD 300  
Db 241 YKGFDESLIIILPAEGMDIEVEKLIPTAOILKWLSEMOEEVEISLPRFKVEQKVDKFD 300  
QY 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPFFNEEDGSEAAATSTGHIPIVMSL 360  
Db 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPFFNEEDGSEAAATSTGHIPIVMSL 360  
QY 361 AQSOFTIANHPFLFIMKHNPTESILFMGRVTNP 392  
Db 361 AQSOFTIANHPFLFIMKHNPTESILFMGRVTNP 392

RESULT 2  
AA04120  
ID AA04120 standard; protein; 392 AA.  
XX  
AC AA04120;  
XX  
DT 14-JUN-1999 (first entry)  
DE Pancreas derived plasminogen activator inhibitor protein.  
XX  
KW Pancreas derived plasminogen activator inhibitor; PAPAI; detection;  
KW diagnosis; breast cancer; pregnancy; wound healing; coagulation disorder;  
KW virus infection.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..14  
FT /label= signal

Protein 15..392  
/label= PAPAI  
FT  
XX  
FN WO9909161-A1.  
XX  
PD 25-FEB-1999.  
XX  
PF 18-FEB-1998; 98WO-US003217.  
XX  
PR 15-AUG-1997; 97US-00934011.  
XX  
PA (HUMA-) HUMAN GENOME SCI INC.  
PA (LONG-) LONG ISLAND JEWISH MEDICAL CENT.  
PI Ni J, Gentz RL, Ruben SM, Shi YE;  
XX  
DR WPI; 1999-190161/16.  
DR N-PSDB; AAX19885.

New isolated pancreas-derived plasminogen activator inhibitor - useful  
for developing products for treating conditions such as complications of  
pregnancy, cancer, wound healing, coagulation disorders or virus  
infection.

Claim 11; Fig 1; 123pp; English.

The present sequence represents an isolated human pancreas-derived  
plasminogen activator inhibitor (PAPAI). PAPAI proteins inhibit  
plasminogen activators such as urokinase and tissue plasminogen  
activator. Products from the present invention can be used for treating  
conditions in which abnormal activity of the plasminogen activator system  
is implicated, e.g. complications of pregnancy such as preeclampsia and  
intrauterine growth retardation, cancer, inflammation and wound healing.  
They can also be used for treating e.g. tumour invasion and  
metastasis, coagulation disorders e.g. arterial thrombi, venous thrombi,  
disseminated intravascular coagulation, and excessive bleeding caused by  
the administration of a pharmaceutical plasminogen activator, infections  
caused by viruses e.g. HIV-1, HIV-2, hepatitis A, B, C, E, F or G. The  
products can also be used for detection and diagnosis

Sequence 392 AA;

Query Match 100.0%; Score 1987; DB 2; Length 392;  
Best Local Similarity 100.0%; Pred. No. 5.8e-170; Indels 0; Gaps 0;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLLFFGSAQSCSAQKNTPEAVDLYQVSLSHKDNIIFSPGLGITLVLEWVQ 60  
Db 1 MDTIFLWSLLLLFFGSAQSCSAQKNTPEAVDLYQVSLSHKDNIIFSPGLGITLVLEWVQ 60  
QY 61 LGAGKAQAOQIROTLLKQOETSAGEEFLVLSKCSAISSEKKQFTFNLANALVLOSGFTVK 120  
Db 61 LGAGKAQAOQIROTLLKQOETSAGEEFLVLSKCSAISSEKKQFTFNLANALVLOSGFTVK 120  
QY 121 EQLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180  
Db 121 EQLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180  
QY 181 NAIYFGDKWKQKFRKEDTQIINFTKNGSTVKIPMKALLRTKYGFSSSLNYQVLELS 240  
Db 181 NAIYFGDKWKQKFRKEDTQIINFTKNGSTVKIPMKALLRTKYGFSSSLNYQVLELS 240  
QY 241 YKGFDESLIIILPAEGMDIEVEKLIPTAOILKWLSEMOEEVEISLPRFKVEQKVDKFD 300  
Db 241 YKGFDESLIIILPAEGMDIEVEKLIPTAOILKWLSEMOEEVEISLPRFKVEQKVDKFD 300  
QY 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPFFNEEDGSEAAATSTGHIPIVMSL 360  
Db 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPFFNEEDGSEAAATSTGHIPIVMSL 360  
QY 361 AQSOFTIANHPFLFIMKHNPTESILFMGRVTNP 392  
Db 361 AQSOFTIANHPFLFIMKHNPTESILFMGRVTNP 392



```

RESULT 3
AAE14266
ID AAE14266 standard; protein; 392 AA.
XX
XX
AC AAE14266;
XX
XX 07-MAR-2002 (first entry)
XX
XX Human Pancreas-derived plasminogen activator inhibitor (PAPAI) #1.
DE
DE Human; pancreas-derived plasminogen activator inhibitor; PAPAI;
KW plasminogen activator inhibitor; PAI; pre-eclampsia; wound healing;
KW intrauterine growth retardation; tumour cell invasion; arthritis;
KW metastasis; inflammation; inflammatory bowel disease; appendicitis;
KW systemic lupus erythematosus; ovulation; cytostatic; gene therapy;
KW prostatic involution; osteonecrosis; breast cancer; pregnancy.
XX
XX Homo sapiens.
OS
XX
XX Key Location/Qualifiers
FH Peptide 1..14
FT /label= Signal_peptide
FT Protein 15..392
FT /note= "Human mature PAPAI"
XX
XX US6303338-B1.
FN
XX
XX 16-OCT-2001.
PD
XX
XX 19-FEB-1998; 98US-00026408.
PF
XX
XX 16-AUG-1996; 96US-0024056P.
PR
XX 15-AUG-1997; 97US-00934011.
XX
XX (HUNA-) HUMAN GENOME SCI INC.
PA
XX
XX Ni J, Gentz RL, Ruben SM, Shi YE;
PI
XX WPI; 2002-033216/04.
DR
XX N-PSDB; AAD23710.
XX
XX Isolated polynucleotides encoding the pancreas-derived plasminogen
PT activator inhibitor protein are useful to treat physiological and
PT pathological conditions including breast cancer, and to detect
PT pathological disorders.
XX
XX Claim 1; Fig 1; 50pp; English.
PS
XX
XX The invention relates to nucleic acids encoding pancreas-derived
CC plasminogen activator inhibitor (PAPAI) protein. Plasminogen activator
CC inhibitor (PAI) 1 and 2 are involved in many physiological and
CC pathological processes, including normal pregnancy, pre-eclampsia,
CC intrauterine growth retardation, wound healing, tumour cell invasion and
CC metastasis, inflammation and arthritis, inflammatory bowel disease,
CC appendicitis, complications from systemic lupus erythematosus, ovulation
CC and prostatic involution and osteonecrosis. PAPAI DNA is used to treat
CC physiological and pathological conditions including breast cancer and to
CC detect pathological disorders. PAPAI DNA is used in gene therapy. The
CC present sequence is a human PAPAI protein
XX
XX Sequence 392 AA;
SQ
Query Match 100.0%; Score 1987; DB 5; Length 392;
Best Local Similarity 100.0%; Pred. No. 5.8e-170;
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MDTIFVLSLLLPFGSQARCSAQKNTPEAVDLYQVSLSHKDNIFPSPLGTLVLEMQV 60
DB 1 MDTIFVLSLLLPFGSQARCSAQKNTPEAVDLYQVSLSHKDNIFPSPLGTLVLEMQV 60
QY 61 LGAKGKAQQIROTLLKQETSAGEEFLVLSKFSALSEKKQETFFNLALYLBQGTVK 120

```

XX Claim 11; Fig 1A-B; 52pp; English.

XX The invention describes an isolated pancreas-derived plasminogen

XX activator inhibitor (PAPAI) polypeptide (I). The polynucleotide (II)

XX encoding (I) is useful for diagnosing a disorder involving comparing

XX PAPAI gene expression levels in cells or body fluid of an individual with

XX the standard expression level where an increase or decrease in the PAPAI

XX gene expression level of the individual is indicative of the disorder.

XX Since PAPAI regulates fibrinolytic system, substantial alterations in

XX PAPAI activity serve as markers of tumour invasiveness and metastasis.

XX (II) is useful for predicting whether a tumour is likely to remain

XX stable, or the invade tissue and ultimately metastasize; a haemorrhage

XX likely to occur in patients suffering from hepatic illness such as

XX alcoholic cirrhosis, primary biliary cirrhosis, and liver cancer; a

XX patient is likely to develop pre-eclampsia; and if a pre-eclamptic

XX patient is at risk for developing eclampsia. (I) is useful for raising

XX polyclonal and monoclonal antibodies which are useful in diagnostic

XX assays for detecting PAPAI protein expression, and to capture PAPAI

XX protein binding proteins which are also candidate agonist or antagonist.

XX (I) is useful for treating: or inhibiting tumour invasion and metastasis

XX in cancers including e.g., leukaemia, breast cancer, lung cancer;

XX coagulation disorders e.g., arterial thrombi, venous thrombi, excessive

XX bleeding and treating viral infections such as human immunodeficiency

XX virus, hepatitis A, B, C, E or G virus. (I) inhibits plasminogen

XX activator system, and thus is useful for treating disease conditions in

XX which abnormal activity of plasminogen-activator system is implicated,

XX e.g., complications of pregnancy such as pre-eclampsia, wound healing and

XX intrauterine growth retardation. This is the amino acid sequence of a

XX human pancreas-derived plasminogen activator inhibitor

XX SQ Sequence 392 AA;

Query Match 100.0%; Score 1987; DB 6; Length 392;

Best Local Similarity 100.0%; Pred. No. 5.8e-170;

Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLPFGSQASRCSAQNTEPAVDLYQEVSLSHKDNIFSPGLGTLVLEWQ 60

DB 1 MDTIFLWSLLLPFGSQASRCSAQNTEPAVDLYQEVSLSHKDNIFSPGLGTLVLEWQ 60

QY 61 LGAKGAAQQIROTTLKQETSAGEEFLVLSKSAISEKKQETFNALANALYQEGFTVK 120

DB 61 LGAKGAAQQIROTTLKQETSAGEEFLVLSKSAISEKKQETFNALANALYQEGFTVK 120

QY 121 EQYLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGLTRVLV 180

DB 121 EQYLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGLTRVLV 180

QY 181 NAIYFGDKWKQKPRKEDTQINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240

DB 181 NAIYFGDKWKQKPRKEDTQINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240

QY 241 YKDEFSLLIILPAEGNDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDK 300

DB 241 YKDEFSLLIILPAEGNDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDK 300

QY 301 VLYSLNITBIFSGCDLSDGTSSEVYVSVQTKVFFNEINDEGSAATSTGHIPIVMSL 360

DB 301 VLYSLNITBIFSGCDLSDGTSSEVYVSVQTKVFFNEINDEGSAATSTGHIPIVMSL 360

QY 361 AQSQFTANHPFLFMKHNPTESILFMGRVTNP 392

DB 361 AQSQFTANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 5

AD005045

ID AD005045 standard; protein; 392 AA.

XX

AC AD005045;

XX

DT 29-JUL-2004 (first entry)

XX Human PAPAI protein #1.

XX Pancreas-derived plasminogen activator inhibitor; PAPAI; human.

XX Homo sapiens.

XX Key Location/Qualifiers

XX Peptide 1..14 /label= signal\_peptide

XX Protein 15..392 /note= "Human mature PAPAI protein"

XX US2004086978-A1.

XX 06-MAY-2004.

XX 29-JUL-2003; 2003US-00628395.

XX 16-AUG-1996; 96US-0024056P.

XX 15-AUG-1997; 97US-00934011.

XX 19-FEB-1998; 98US-00026408.

XX 12-JUL-2001; 2001US-00902684.

XX (NIJJ/) NI J.

XX (GENTZ/) GENTZ R L.

XX (RUBE/) RUBEN S M.

XX (SHIY/) SHI Y E.

XX NI J, Gentz RL, Ruben SM, Shi YE;

XX WPI: 2004-356204/33.

XX N-PSDB; ADO05044.

XX Producing an antibody that specifically binds to pancreas-derived

XX plasminogen activator inhibitor (PAPAI) polypeptide comprises introducing

XX the polypeptide to the animal, and recovering the antibody.

XX Claim 1; SEQ ID NO 2; 51pp; English.

XX The present invention provides pancreas-derived plasminogen activator

XX inhibitor (PAPAI) polypeptides and their encoding polynucleotides. The

XX invention is useful for producing an antibody that specifically binds to

XX pancreas-derived plasminogen activator inhibitor (PAPAI) polypeptide. The

XX present sequence is human pancreas-derived plasminogen activator

XX inhibitor (PAPAI) protein.

XX SQ Sequence 392 AA;

Query Match 100.0%; Score 1987; DB 8; Length 392;

Best Local Similarity 100.0%; Pred. No. 5.8e-170;

Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLPFGSQASRCSAQNTEPAVDLYQEVSLSHKDNIFSPGLGTLVLEWQ 60

DB 1 MDTIFLWSLLLPFGSQASRCSAQNTEPAVDLYQEVSLSHKDNIFSPGLGTLVLEWQ 60

QY 61 LGAKGAAQQIROTTLKQETSAGEEFLVLSKSAISEKKQETFNALANALYQEGFTVK 120

DB 61 LGAKGAAQQIROTTLKQETSAGEEFLVLSKSAISEKKQETFNALANALYQEGFTVK 120

QY 121 EQYLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGLTRVLV 180

DB 121 EQYLHGNKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGLTRVLV 180

QY 181 NAIYFGDKWKQKPRKEDTQINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240

DB 181 NAIYFGDKWKQKPRKEDTQINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240

QY 241 YKDEFSLLIILPAEGNDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDK 300

DB 241 YKDEFSLLIILPAEGNDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDK 300

QY 301 VLYSLNITEIFSGGCDLSGITSSEVYVSVQTKVFFFEINEDGSEAAATSGIHIPVIMSL 360  
DB 301 VLYSLNITEIFSGGCDLSGITSSEVYVSVQTKVFFFEINEDGSEAAATSGIHIPVIMSL 360  
QY 361 AQSOFIANHPFLFIMKHNPTESILFMGRVTNP 392  
DB 361 AQSOFIANHPFLFIMKHNPTESILFMGRVTNP 392  
RESULT 6  
AAV04121  
ID AAY04121 standard; protein; 405 AA.  
XX  
AC AAY04121;  
XX  
DT 14-JUN-1999 (first entry)  
XX  
DE Pancreas derived plasminogen activator inhibitor protein.  
XX  
KW Pancreas derived plasminogen activator inhibitor; PAPAI; detection;  
KW diagnosis; breast cancer; pregnancy; wound healing; coagulation disorder;  
KW virus infection.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..18  
FT /label= signal  
FT Protein 20..405  
FT /label= PAPAI  
XX  
PN WO9909161-A1.  
XX  
PD 25-FEB-1999.  
XX  
PF 18-FEB-1998; 98WO-US003217.  
XX  
PR 15-AUG-1997; 97US-00934011.  
XX  
PA (HUMA-) HUMAN GENOME SCI INC.  
PA (LONG-) LONG ISLAND JEWISH MEDICAL CENT.  
XX  
PI Ni J, Gentz RL, Ruben SM, Shi YE;  
XX  
DR WPI; 1999-190161/16.  
DR N-PSDB; AAX19886.  
XX  
PT New isolated pancreas-derived plasminogen activator inhibitor - useful  
PT for developing products for treating conditions such as complications of  
PT pregnancy, cancer, wound healing, coagulation disorders or virus  
PT infection.  
XX  
PS Claim 11; Fig 4; 123pp; English.  
XX  
CC The present sequence represents an isolated human pancreas-derived  
CC plasminogen activator inhibitor (PAPAI). PAPAI proteins inhibit  
CC plasminogen activators such as urokinase and tissue plasminogen  
CC activator. Products from the present invention can be used for treating  
CC conditions in which abnormal activity of the plasminogen activator system  
CC is implicated, e.g. complications of pregnancy such as preeclampsia and  
CC intrauterine growth retardation, cancer, inflammation and wound healing.  
CC They can also be used for treating or preventing e.g. tumour invasion and  
CC metastasis, coagulation disorders e.g. arterial thrombi, venous thrombi,  
CC disseminated intravascular coagulation, and excessive bleeding caused by  
CC the administration of a pharmaceutical plasminogen activator, infections  
CC caused by viruses e.g. HIV-1, HIV-2, hepatitis A, B, C, E, F or G. The  
CC products can also be used for detection and diagnosis  
XX  
SQ Sequence 405 AA;  
Query Match 100.0%; Score 1987; DB 2; Length 405;  
Best Local Similarity 100.0%; Pred. No. 66-170; Indels 0; Gaps 0;  
Matches 392; Conservative 0; Mismatches 0;

QY 1 MDTIFLSLLLLFFGSOARCSAQKNTFAVDLYQEVSLSHKDNIFSPGLGTLVLEWVQ 60  
DB 1 MDTIFLSLLLLFFGSOARCSAQKNTFAVDLYQEVSLSHKDNIFSPGLGTLVLEWVQ 60  
QY 61 LGAKGKAQQIQTQLKQOETSAGBEFLVLKSFCSAISSEKKOEFTFNANALYLOEGFTVK 120  
DB 61 LGAKGKAQQIQTQLKQOETSAGBEFLVLKSFCSAISSEKKOEFTFNANALYLOEGFTVK 120  
QY 121 EYLYHGNKEFFQSAIKLVDFODAKACAEMLSTWVERKTDGKIKDMFSGEFGPLTRVLV 180  
DB 121 EYLYHGNKEFFQSAIKLVDFODAKACAEMLSTWVERKTDGKIKDMFSGEFGPLTRVLV 180  
QY 181 NAIYFGDWKQKFRKEDTQLINFTKNGSTVKIPMMKALLRTKYGFSESSLNQVLELS 240  
DB 181 NAIYFGDWKQKFRKEDTQLINFTKNGSTVKIPMMKALLRTKYGFSESSLNQVLELS 240  
QY 241 YKGFDFSLIITLPAEGNDIEBEVKLIITAOQLLKWLSMQEVEEVEISLPRKVEQKVPDK 300  
DB 241 YKGFDFSLIITLPAEGNDIEBEVKLIITAOQLLKWLSMQEVEEVEISLPRKVEQKVPDK 300  
QY 301 VLYSLNITEIFSGGCDLSGITSSEVYVSVQTKVFFFEINEDGSEAAATSGIHIPVIMSL 360  
DB 301 VLYSLNITEIFSGGCDLSGITSSEVYVSVQTKVFFFEINEDGSEAAATSGIHIPVIMSL 360  
QY 361 AQSOFIANHPFLFIMKHNPTESILFMGRVTNP 392  
DB 361 AQSOFIANHPFLFIMKHNPTESILFMGRVTNP 392  
RESULT 7  
AAE14267  
ID AAE14267 standard; protein; 405 AA.  
XX  
AC AAE14267;  
XX  
DT 07-MAR-2002 (first entry)  
XX  
DE Human Pancreas-derived plasminogen activator inhibitor (PAPAI) #2.  
KW Human; pancreas-derived plasminogen activator inhibitor; PAPAI;  
KW plasminogen activator inhibitor; PAI; preeclampsia; wound healing;  
KW intrauterine growth retardation; tumour cell invasion; arthritis;  
KW metastasis; inflammation; inflammatory bowel disease; appendicitis;  
KW systemic lupus erythematosus; ovulation; cytostatic; gene therapy;  
KW prostatic involution; osteonecrosis; breast cancer; pregnancy.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..18  
FT /label= Signal\_peptide  
FT Protein 19..405  
FT /note= "Human mature PAPAI"  
XX  
PN US6303338-B1.  
XX  
PD 16-OCT-2001.  
XX  
PF 19-FEB-1998; 98US-00026408.  
XX  
PR 16-AUG-1996; 96US-0024056P.  
PR 15-AUG-1997; 97US-00934011.  
XX  
PA (HUMA-) HUMAN GENOME SCI INC.  
XX  
PI Ni J, Gentz RL, Ruben SM, Shi YE;  
XX  
DR WPI; 2002-033216/04.  
DR N-PSDB; AAD23718.  
XX  
PT Isolated polynucleotides encoding the pancreas-derived plasminogen  
PT activator inhibitor protein are useful to treat physiological and

PT	pathological conditions including breast cancer, and to detect	
PT	pathological disorders.	
XX		
PS	Claim 37; Fig 4; 50pp; English.	
XX		
CC	The invention relates to nucleic acids encoding pancreas-derived	
CC	plasminogen activator inhibitor (PAPAI) protein. Plasminogen activator	
CC	inhibitor (PAI) 1 and 2 are involved in many physiological and	
CC	pathological processes, including normal pregnancy, preeclampsia,	
CC	intrauterine growth retardation, wound healing, tumour cell invasion and	
CC	metastasis, inflammation and arthritis, inflammatory bowel disease,	
CC	appendicitis, complications from systemic lupus erythematosus, ovulation	
CC	and prostatic involution and osteonecrosis. PAPAI DNA is used to treat	
CC	physiological and pathological conditions including breast cancer and to	
CC	detect pathological disorders. PAPAI DNA is used in gene therapy. The	
CC	present sequence is a human PAPAI protein	
XX		
SQ	Sequence 405 AA;	
	Query Match 100.0%; Score 1987; DB 5; Length 405;	
	Best Local Similarity 100.0%; Pred. No. 66-170;	
	Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
Qy	1 MDTIFLWSLLLLFFGSAQSCSAQKNTFAVDLYQVSLSHKDNIIFFSLGTLVLEVMQ 60	
Db	1 MDTIFLWSLLLLFFGSAQSCSAQKNTFAVDLYQVSLSHKDNIIFFSLGTLVLEVMQ 60	
Qy	61 LGAKGAQOOIROTLLKQETSAGEEFLVLKSCSAISEKKQETFTNLNALLYQEGFTVK 120	
Db	61 LGAKGAQOOIROTLLKQETSAGEEFLVLKSCSAISEKKQETFTNLNALLYQEGFTVK 120	
Qy	121 EOYLHGKKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180	
Db	121 EOYLHGKKEFFQSAIKLVDFQDAKCAEMISTWVERKTDGKIDMFSGEEFGPLRLVLV 180	
Qy	181 NAIYFGDKWKQPKREDTQIINTKNGSTVKIPMKALLRTKYGYFSESSLYNOVLELS 240	
Db	181 NAIYFGDKWKQPKREDTQIINTKNGSTVKIPMKALLRTKYGYFSESSLYNOVLELS 240	
Qy	241 YKGFESLIILPAEGMDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDPKD 300	
Db	241 YKGFESLIILPAEGMDIEVEKLITAOQILKWLSEMOEEVEISLPRFKVEQKVDPKD 300	
Qy	301 VLYSLNITRIFSGCDLSGHTSDSEYVVSQVTKRVFFFEINEDGSAATSTGIHIPVIMSL 360	
Db	301 VLYSLNITRIFSGCDLSGHTSDSEYVVSQVTKRVFFFEINEDGSAATSTGIHIPVIMSL 360	
Qy	361 AOSQFTANHPFLFMKHNPTESILFMGRVTNP 392	
Db	361 AOSQFTANHPFLFMKHNPTESILFMGRVTNP 392	
XX		
DE	Human pancreas-derived plasminogen activator inhibitor #2.	
XX		
XX	Human; pancreas-derived plasminogen activator inhibitor; PAPAI;	
KW	cytostatic; vulnery; gynecological; haemostatic; virucide; HIV;	
KW	human immunodeficiency virus; gene therapy; fibrinolytic system;	
KW	tumour invasion; metastasis; haemorrhage; hepatic illness; liver cancer;	
KW	alcoholic cirrhosis; primary biliary cirrhosis; pre-eclampsia; eclampsia;	
KW	leukaemia; breast cancer; lung cancer; coagulation disorder;	
KW	arterial thrombus; venous thrombus; excessive bleeding; viral infection;	
KW	hepatitis; wound healing; intrauterine growth retardation.	
OS	Homo sapiens.	
XX		

PH	Key	Location/Qualifiers
FT	Peptide	1..18
FT		/label= Signal_peptide
FT	Protein	19..405
FT		/label= Mature PAPAI
FT		/note= "Pancreas-derived plasminogen activator inhibitor"
XX		
XX	US2002127640-A1.	
PN		
XX	12-SEP-2002.	
PD		
XX	12-JUL-2001; 2001US-00902684.	
XX		
XX	16-AUG-1996; 96US-0024056P.	
PR	15-AUG-1997; 97US-00934011.	
PR	19-FEB-1998; 98US-00026408.	
XX		
PA	(HUMA-) HUMAN GENOME SCI INC.	
XX		
PI	Ni J, Gentz RL, Ruben SM, Shi YE;	
XX		
DR	WPI; 2003-066897/06.	
DR	N-PSDB; ABS57777.	
XX		
PT	Novel isolated pancreas-derived plasminogen activator inhibitor	
PT	polypeptide useful for treating or inhibiting tumor invasion and	
PT	metastasis in cancers, pre-eclampsia, arterial or venous thrombi,	
PT	excessive bleeding.	
XX		
PS	Claim 11; Fig 4A-B; 52pp; English.	
XX		
CC	The invention describes an isolated pancreas-derived plasminogen	
CC	activator inhibitor (PAPAI) polypeptide (I). The polynucleotide (II)	
CC	encoding (I) is useful for diagnosing a disorder involving comparing	
CC	PAPAI gene expression levels in cells or body fluid of an individual with	
CC	the standard expression level where an increase or decrease in the PAPAI	
CC	gene expression level of the individual is indicative of the disorder.	
CC	Since PAPAI regulates fibrinolytic system, substantial alterations in	
CC	PAPAI activity, serve as markers of tumour invasiveness and metastasis.	
CC	(II) is useful for predicting whether a tumour is likely to remain	
CC	stable, or the invade tissue and ultimately metastasise: a haemorrhage	
CC	likely to occur in patients suffering from hepatic illness such as	
CC	alcoholic cirrhosis, primary biliary cirrhosis, and liver cancer; a	
CC	patient is likely to develop pre-eclampsia; and if a pre-eclamptic	
CC	patient is at risk for developing eclampsia. (I) is useful for raising	
CC	polyclonal and monoclonal antibodies which are useful in diagnostic	
CC	assays for detecting PAPAI protein expression, and to capture PAPAI	
CC	protein binding proteins which are also candidate agonist or antagonist.	
CC	(I) is useful for treating: or inhibiting tumour invasion and metastasis	
CC	in cancers including e.g., leukaemia, breast cancer, lung cancer;	
CC	coagulation disorders e.g., arterial thrombi, venous thrombi, excessive	
CC	bleeding and treating viral infections such as human immunodeficiency	
CC	virus, hepatitis A, B, C, E or G virus. (I) inhibits plasminogen	
CC	activator system, and thus is useful for treating disease conditions in	
CC	which abnormal activity of plasminogen-activator system is implicated,	
CC	e.g., complications of pregnancy such as pre-eclampsia, wound healing, and	
CC	intrauterine growth retardation. This is the amino acid sequence of a	
CC	human pancreas-derived plasminogen activator inhibitor	
XX		
SQ	Sequence 405 AA;	
	Query Match 100.0%; Score 1987; DB 6; Length 405;	
	Best Local Similarity 100.0%; Pred. No. 66-170;	
	Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
Qy	1 MDTIFLWSLLLLFFGSAQSCSAQKNTFAVDLYQVSLSHKDNIIFFSLGTLVLEVMQ 60	
Db	1 MDTIFLWSLLLLFFGSAQSCSAQKNTFAVDLYQVSLSHKDNIIFFSLGTLVLEVMQ 60	
Qy	61 LGAKGAQOOIROTLLKQETSAGEEFLVLKSCSAISEKKQETFTNLNALLYQEGFTVK 120	
Db	61 LGAKGAQOOIROTLLKQETSAGEEFLVLKSCSAISEKKQETFTNLNALLYQEGFTVK 120	

QY 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGBEFGPLTRVLV 180  
 Db 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGBEFGPLTRVLV 180  
 QY 181 NAIYFGDWKQKPRKEDTQLINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240  
 Db 181 NAIYFGDWKQKPRKEDTQLINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240  
 QY 241 YKGDEFSLIIILPAEGMDIEBEVKLITAQOILKWLSEMOBEEVEISLPRFKVEQKVDFKD 300  
 Db 241 YKGDEFSLIIILPAEGMDIEBEVKLITAQOILKWLSEMOBEEVEISLPRFKVEQKVDFKD 300  
 QY 301 VLYSLNITEIFSGCDLSGITDSSEVYVSQVTKVFFNEEDGSEAAATSTGIHIPVIMSL 360  
 Db 301 VLYSLNITEIFSGCDLSGITDSSEVYVSQVTKVFFNEEDGSEAAATSTGIHIPVIMSL 360  
 QY 361 AQSQFIANHPFLFMKNPTESILFMGRVTNP 392  
 Db 361 AQSQFIANHPFLFMKNPTESILFMGRVTNP 392  
 RESULT 9  
 ID ADO05056  
 XX ADO05056 standard; protein; 405 AA.  
 AC ADO05056;  
 XX  
 XX 29-JUL-2004 (first entry)  
 DT Human PAPAI protein #2.  
 DE  
 DE Pancreas-derived plasminogen activator inhibitor; PAPAI; human.  
 KW  
 XX Homo sapiens.  
 OS  
 FH Key Location/Qualifiers  
 FT Peptide 1..18  
 FT /label= Signal\_peptide  
 FT Protein 19..392  
 FT /note= "Human mature PAPAI protein"  
 XX  
 XX US2004086978-A1.  
 XX  
 XX 06-MAY-2004.  
 XX  
 XX 29-JUL-2003; 2003US-00628395.  
 XX  
 XX 16-AUG-1996; 96US-0024056P.  
 XX 15-AUG-1997; 97US-00934011.  
 XX 19-FEB-1998; 98US-00026408.  
 XX 12-JUL-2001; 2001US-00902684.  
 XX  
 XX (NIJ/) NI J.  
 XX (GENTZ/) GENTZ R L.  
 XX (RUBE/) RUBEN S M.  
 XX (SHIY/) SHI Y E.  
 XX  
 XX Ni J, Gentz RL, Ruben SM, Shi YE;  
 XX  
 XX WPI; 2004-356204/33.  
 XX N-PSDB; ADO05055.  
 XX  
 XX Producing an antibody that specifically binds to pancreas-derived  
 XX plasminogen activator inhibitor (PAPAI) polypeptide comprises introducing  
 XX the polypeptide to the animal, and recovering the antibody.  
 XX  
 XX Disclosure; SEQ ID NO 13; 51pp; English.  
 XX  
 XX The present invention provides pancreas-derived plasminogen activator  
 XX inhibitor (PAPAI) polypeptides and their encoding polynucleotides. The  
 XX invention is useful for producing an antibody that specifically binds to  
 XX pancreas-derived plasminogen activator inhibitor (PAPAI) polypeptide. The  
 XX present sequence is human pancreas-derived plasminogen activator

CC inhibitor (PAPAI) protein.  
 XX  
 SQ Sequence 405 AA;  
 Query Match 100.0%; Score 1987; DB 8; Length 405;  
 Best Local Similarity 100.0%; Pred. No. 6e-170;  
 Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MDTIFLWSLLLLFFGSGAQRCSAQKNTFAVDLYQEVSLSHKDNIIIFSPGLGITLVLEMVQ 60  
 Db 1 MDTIFLWSLLLLFFGSGAQRCSAQKNTFAVDLYQEVSLSHKDNIIIFSPGLGITLVLEMVQ 60  
 QY 61 LGAKGKAQQQIRQTLKQOETSAGBEFLVLSFCSAISSEKKOEFTFNLANALYLOEGFTVK 120  
 Db 61 LGAKGKAQQQIRQTLKQOETSAGBEFLVLSFCSAISSEKKOEFTFNLANALYLOEGFTVK 120  
 QY 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGBEFGPLTRVLV 180  
 Db 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGBEFGPLTRVLV 180  
 QY 181 NAIYFGDWKQKPRKEDTQLINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240  
 Db 181 NAIYFGDWKQKPRKEDTQLINFTKNGSTVKIPMKALLRTKYGYFSSSLNYQVLELS 240  
 QY 241 YKGDEFSLIIILPAEGMDIEBEVKLITAQOILKWLSEMOBEEVEISLPRFKVEQKVDFKD 300  
 Db 241 YKGDEFSLIIILPAEGMDIEBEVKLITAQOILKWLSEMOBEEVEISLPRFKVEQKVDFKD 300  
 QY 301 VLYSLNITEIFSGCDLSGITDSSEVYVSQVTKVFFNEEDGSEAAATSTGIHIPVIMSL 360  
 Db 301 VLYSLNITEIFSGCDLSGITDSSEVYVSQVTKVFFNEEDGSEAAATSTGIHIPVIMSL 360  
 QY 361 AQSQFIANHPFLFMKNPTESILFMGRVTNP 392  
 Db 361 AQSQFIANHPFLFMKNPTESILFMGRVTNP 392  
 RESULT 10  
 ID ADO19298  
 XX ADO19298 standard; protein; 405 AA.  
 AC ADO19298;  
 XX  
 XX 26-AUG-2004 (first entry)  
 XX  
 XX Human soft tissue sarcoma-upregulated protein - SEQ ID 2117.  
 XX  
 XX soft tissue sarcoma; cytostatic; gene therapy; vaccine; screening; human.  
 XX Homo sapiens.  
 XX WO2004048938-A2.  
 XX  
 XX 10-JUN-2004.  
 XX  
 XX 26-NOV-2003; 2003WO-US038193.  
 XX  
 XX 26-NOV-2002; 2002US-0429739P.  
 XX  
 XX (PROT-) PROTEIN DESIGN LABS INC.  
 XX  
 XX Aziz N, Ginsburg WM, Zlotnik A;  
 XX WPI; 2004-441208/41.  
 XX  
 XX Early detection of soft tissue sarcoma comprises determining expression  
 XX of a gene in a first soft tissue sample and a normal soft tissue sample  
 XX and comparing the gene expression, also useful in treating soft tissue  
 XX sarcoma.  
 XX  
 XX Example 2; SEQ ID NO 2117; 210pp; English.  
 XX  
 XX The invention relates to a novel method for detecting soft tissue sarcoma

CC which comprises obtaining a first soft tissue sample from an individual  
 CC and a normal soft tissue sample from the same or different individual,  
 CC determining the expression of a gene in both samples and comparing the  
 CC expression of the gene in both soft tissue samples, where a higher level  
 CC of protein expression in the first soft tissue sample indicates the  
 CC presence of soft tissue sarcoma. The method of the invention has  
 CC cytostatic applications and may be useful for detecting soft tissue  
 CC sarcoma, possibly via gene therapy or vaccine production. The nucleic  
 CC acid sequences may be useful in diagnostic and screening applications.  
 CC The current sequence is that of a human soft tissue sarcoma-upregulated  
 CC protein of the invention. The current sequence is not shown within the  
 CC specification per se but was submitted in CD format by the inventor.

XX Sequence 405 AA;

Query Match 99.2%; Score 1972; DB 8; Length 405;  
 Best Local Similarity 99.5%; Pred. No. 1.3e-168;  
 Matches 390; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MDTIFLSLLLLPFGSOASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMQ 60  
 DB 1 MDTIFLSLLLLPFGSOASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMQ 60  
 QY 61 LGAKGKAQQIQTQLKQETSAEGLVLSKSAISEKKQETFNLANALYLQEGFTVK 120  
 DB 61 LGAKGKAQQIQTQLKQETSAEGLVLSKSAISEKKQETFNLANALYLQEGFTVK 120  
 QY 121 EQLHGNKEFPQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMFSGEEFGPLTRVLV 180  
 DB 121 EQLHGNKEFPQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMFSGEEFGPLTRVLV 180  
 QY 181 NAIYFGDKWKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240  
 DB 181 NAIYFGDKWKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240  
 QY 241 YGDEPFLIIILPAEGMDIEBEVKLITAQOILKWLSEMOEEVEISLPRFKVQKVDK 300  
 DB 241 YGDEPFLIIILPAEGMDIEBEVKLITAQOILKWLSEMOEEVEISLPRFKVQKVDK 300  
 QY 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPEINEDGSEATSTGIHIPVIMSL 360  
 DB 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPEINEDGSEATSTGIHIPVIMSL 360  
 QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
 DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 11

AA01601 ID AA01601 standard; protein; 405 AA.

XX AA01601;

DT 18-JUN-1999 (first entry)

XX Protein encoded by the human pancrin gene.

XX Human pancrin gene; serine protease inhibitor; serpin; gene therapy;  
 XX cancer treatment; pancreatic cancer; tumour.

OS Homo sapiens.

PN WO9911786-A1.

XX 11-MAR-1999.

XX 28-AUG-1998; 98WO-JP003841.

XX 01-SEP-1997; 97JP-00252770.

XX 10-FEB-1998; 98JP-00044312.

XX (SAXA) OTSUKA PHARM CO LTD.

XX Ozaki K, Nagata M, Fujiwara T, Hirano H, Kyushiki H, Okamoto T;  
 PI Niimi M;  
 XX WPI: 1999-205189/17.  
 DR N-PSDB; AAX26705.  
 XX Drug compositions, useful for, e.g. gene therapy with efficacious  
 PT treatment of pancreatic cancer and inhibition of its metastasis.  
 XX Claim 1; Page 98-100; 112pp; Japanese.

CC The present sequence is encoded by a human pancrin gene. The pancrin gene  
 CC encodes a protein homologous to the serine protease inhibitor of serpin.  
 CC The products may be used for gene therapy, e.g. in treatment of cancers.  
 CC The pancrin gene can be formulated into a drug composition for gene  
 CC therapy of pancreatic cancer/tumour and for inhibition of its metastasis  
 CC to suppress further malignant transformation and proliferation. Such  
 CC genes can also be applied in clarifying, diagnosing, preventing and  
 CC treating pancreatic cancer and its metastasis  
 XX Sequence 405 AA;

Query Match 99.0%; Score 1968; DB 2; Length 405;  
 Best Local Similarity 99.2%; Pred. No. 3.1e-168;  
 Matches 389; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 MDTIFLSLLLLPFGSOASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMQ 60  
 DB 1 MDTIFLSLLLLPFGSOASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMQ 60  
 QY 61 LGAKGKAQQIQTQLKQETSAEGLVLSKSAISEKKQETFNLANALYLQEGFTVK 120  
 DB 61 LGAKGKAQQIQTQLKQETSAEGLVLSKSAISEKKQETFNLANALYLQEGFTVK 120  
 QY 121 EQLHGNKEFPQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMFSGEEFGPLTRVLV 180  
 DB 121 EQLHGNKEFPQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMFSGEEFGPLTRVLV 180  
 QY 181 NAIYFGDKWKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240  
 DB 181 NAIYFGDKWKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGFSESSLYQVLELS 240  
 QY 241 YGDEPFLIIILPAEGMDIEBEVKLITAQOILKWLSEMOEEVEISLPRFKVQKVDK 300  
 DB 241 YGDEPFLIIILPAEGMDIEBEVKLITAQOILKWLSEMOEEVEISLPRFKVQKVDK 300  
 QY 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPEINEDGSEATSTGIHIPVIMSL 360  
 DB 301 VLYSLNITEIFSGGCDLSGITDSSEVYVSVQTKVPEINEDGSEATSTGIHIPVIMSL 360  
 QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
 DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 12

AA06202 ID AA06202 standard; protein; 406 AA.

XX AA06202;

DT 12-FEB-1997 (first entry)

XX Human pancreas-derived serpin.

XX Pancreas-derived serpin; PDS; serine protease inhibitor; pancreatitis;  
 XX inflammation; anti-inflammatory; diagnosis; therapy.

OS Homo sapiens.

XX WO9634957-A1.

XX

PD 07-NOV-1996.  
 PF 01-MAY-1996; 96WO-US006137.  
 XX  
 PR 02-MAY-1995; 95US-00434881.  
 XX  
 PA (INCY-) INCYTE PHARM INC.  
 XX  
 PI Braxton SM, Wilde CG, Diep D;  
 XX  
 XX WPI; 1996-518311/51.  
 DR N-PSDB; AAT42978.  
 XX  
 XX DNA encoding pancreas derived serpin - useful in diagnosis and treatment  
 PT of pancreatic inflammation and disease.  
 PT  
 PS Claim 1; Page 24-26; 36pp; English.  
 XX  
 CC Human pancreas-derived serpin (PDS) (AAW06202) is a novel serine protease  
 CC inhibitor that is expressed specifically in the pancreas. It is the  
 CC product of a cDNA clone (AAT42978) obtd. from a human pancreas library.  
 CC Recombinant PDS can be produced in transformed host cells. The host cells  
 CC or isolated PDS can be used to screen for cpds. that modulate PDS  
 CC activity. PDS can be used as a specific protease inhibitor to treat viral  
 CC infections, endotoxin or exotoxin poisoning, ischaemia, anoxia, direct  
 CC trauma and other physiological or pathological conditions of the  
 CC pancreas  
 XX  
 SQ Sequence 406 AA;  
 Query Match 91.8%; Score 1823.5; DB 2; Length 406;  
 Best Local Similarity 92.4%; Pred. No. 3.1e-155;  
 Matches 366; Conservative 9; Mismatches 14; Indels 7; Gaps 2;  
 QY 1 MDTIFLWSLLLPFGSQASCSAQKNTPEAVDLYQVSLSHKDNIIIFSPGLITLVLEMQ 60  
 DB 1 MDTIFVWSLLLPFGSQASCSAQKNTPEFGVDLYQVSLSHKDNIIIFSPGLITLVLEMQ 60  
 QY 61 LGAKGAAQQIQTLLQKQETSAGSEEFVLKFSFSAISEKKQKQETFNLANALYL---QEG 116  
 DB 61 LGAKGAAQQIQTLLQKQETSAGSEEFVLKFSFSAISEKKQKQK---NLHLILPMPSTSQEG 117  
 QY 117 FTVKEQYLHNGKEFFQSAIKLVDPQAKACAEIMSTWVERKTGKIKDMFSGEEFQPLTR 176  
 DB 118 FTVKEQYLHNGKEFFQSAIKLVDPQAKACAGIMSTWVERKTGKIKDMFSGEEFQPLTR 177  
 QY 177 LVLVNAIFYKGDWKQKPRKEDTQIINFTKNGSTVXIPMMKALLRTKYGYFSESSLNQV 236  
 DB 178 LVLVNAIFYKGDWKQKPRKEDTQIINFTKNGSTVXIPMMKALLRTKYGYFSESSLNQV 237  
 QY 237 LELSYKGDEFSLLIILPAEGMDIEVEKLIITAOQILKWLSEMOEVEISLPRFKVEQKV 296  
 DB 238 LELSYKGDEFSLLIILPAEGMDIEVEKLIITAOQILKWLSEMOEVEISLPRFKVEQKV 297  
 QY 297 DFKDVLVSLNITIFSGGCDLSGITDSSEVYVSVQVTKVFFNEPDGSEAASTGTHIPV 356  
 DB 298 DFKDVLVSLNITIFSGGCDLSGITDSSEVYVSVQVTKVFFNEPDGSEAASTGTHIPV 357  
 QY 357 IMSLAQSQFIANHPFLFIMXHNPTESILFMGRVTNP 392  
 DB 358 IMSLAQSQFIANHPFLFIMXHNPTESILFMGRVTNP 393  
 RESULT 13  
 ID AAW60054  
 XX AAW60054 standard; protein; 410 AA.  
 AC  
 XX  
 XX  
 DT 21-AUG-1998 (first entry)  
 DE Brain-associated inhibitor of tissue plasminogen activator (Bait).  
 XX

KW Brain-associated inhibitor of tissue plasminogen activator; BAIT; tPA;  
 KW treatment; diagnosis; neurological disease; serpin; Alzheimer's disease;  
 XX tissue plasminogen activator; human.  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 PH Peptide 1..18  
 FT /note= "signal peptide"  
 FT Protein 19..410  
 FT /note= "mature protein"  
 XX  
 PN W09816643-A1.  
 XX  
 XX 23-APR-1998.  
 PD  
 XX 11-OCT-1996; 96WO-US016484.  
 PF  
 XX 11-OCT-1996; 96WO-US016484.  
 PR  
 XX (HUMA-) HUMAN GENOME SCI INC.  
 PA  
 XX Hastings GA, Lawrence DA, Coleman TA, Dillon RJ;  
 PI  
 XX WPI; 1998-251290/22.  
 DR N-PSDB; AAV34532.  
 XX  
 XX New nucleic acid encoding brain associated inhibitor of tissue  
 PT plasminogen activator - and related vectors, transformed cells,  
 PT poly(peptides), antibodies and inhibitors, useful for treating and  
 PT diagnosing neurological disease and modulating activity of plasminogen  
 PT activator.  
 XX  
 PS Claim 3; Fig 1A-B; 103pp; English.  
 XX  
 CC This represents a brain-associated inhibitor of tissue plasminogen  
 CC activator (BAIT) polypeptide. BAIT is a member of the serpin superfamily,  
 CC expressed mainly in brain tissue and probably the human analogue of  
 CC chicken neuroserpin. It inhibits tissue plasminogen activator (tPA)  
 CC selectively, with little effect on trypsin, thrombin or urokinase. The  
 CC BAIT gene is located at chromosome 4q31.2-31.3 in humans. BAIT is a  
 CC regulator (inhibitor) of serine proteases and may be involved in  
 CC disorders related to haemostasis, angiogenesis, tumour metastasis,  
 CC cellular migration, ovulation and neurogenesis. It is used to identify  
 CC specific inhibitors or enhancers. It can be therapeutically useful in  
 CC cases where endogenous BAIT activity is insufficient, e.g. amyotrophic  
 CC lateral sclerosis, motor neuron damage caused by spinal cord injury, and  
 CC Alzheimer's disease. BAIT is used to modulate tPA where this is being  
 CC used as a thrombolytic agent or where it is expressed from neural  
 CC tumours. Since altered levels of BAIT are associated with some diseases  
 CC of the central and peripheral nervous systems, monitoring expression of  
 CC the BAIT gene can be used diagnostically to detect impaired learning and  
 CC memory, including in cases of Alzheimer's disease. Other uses of BAIT  
 CC polypeptides are as molecular weight markers, for generating antibodies  
 CC and in yeast two-hybrid assays to capture specific binding proteins.  
 CC Antibodies that bind specifically to BAIT or its fragments are useful as  
 CC immunoassay and in vivo imaging agents, and also for polypeptide  
 CC purification. The BAIT encoding nucleic acid and probes and primers  
 CC derived from it are used for gene mapping, for detecting BAIT gene  
 CC expression and for isolation of related and variant genes  
 XX  
 SQ Sequence 410 AA;  
 Query Match 39.8%; Score 791.5; DB 2; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 2.3e-62;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
 QY 6 LWSLLLLPFGSQASCSAQKNTPEAVDLYQVSLSHKDNIIIFSPGLITLVLEMQVQAK 64  
 DB 6 LFSLLVLQSMATGATFPPEEATDLSVNMYNELRATGEDENILFSPSLALAMGMELGAQ 65  
 QY 65 GXAQQIIPQTLKQOETSAGSEEFVLKFSFSAISEKKQKQETFNLANALYLQEGFTVKEOYL 124  
 XX



66 GSTQKEIRHSMGVDSLKNGEESFLKFEFSNNVTAKESQYVMKIANSFLVQNGFHVNEEFL 125  
 125 HGNKEPFOAIAKLVDFODAKACAEMLSTWVERKTGKIDMFSGEFGPLTRVLVNAIY 184  
 126 QMKKYFNAAVNVHDFSONVAVNYINKWENNTNLLVDLVSFRDFDAATYALALINAVY 185  
 185 FKGDWKQKFRKEDTQINFTKNGSTVKIPMMKALLRTKYGFSESSLN----YQVLELS 240  
 186 FKGNWKSQFRPENTRFTSKDDESEVOIPDMYQQGEFFYGFSGSNEAGGIYQVLEIP 245  
 241 YKGFDESLIILPAEGNDIEVEKLITAOQILKWLSEMOEVEEISLPKPKVEQKDFKD 300  
 246 YEGDEISMLVLRSQREVPATLPLVKAQLVEEWANSVKQKVEVYLPFTVEQEDLKD 305  
 301 VLXSLNITEIFSGGCDLSGITDSEVVVSQVTKVFEINEDGSEAAATSTGHIPIVMSL 360  
 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAIHKSFLVNEEGSEAAAVSGMTAISRMV 365  
 361 AQSQFIANHPFLFMKINPTESILFMGRVTNP 392  
 366 LYPQVIYVDHPFFFLIRNRTGTILFMGRVWHP 397

RESULT 14  
 AAY31663  
 ID AAY31663 standard; protein; 410 AA.  
 AC AAY31663;

09-NOV-1999 (first entry)

Human neuroserpin.

Neuroserpin; human; nervous system disorder; stroke; tumour; metastasis;  
 retina; brain; diagnosis; therapy.

Homo sapiens.

Key Location/Qualifiers  
 Peptide 1..16  
 Protein /note= "signal peptide" 17..410  
 Domain /note= "mature protein" 327..360  
 /note= "reactive site loop"

WO9941381-A1.

19-AUG-1999.

12-FEB-1999; 99WO-IB000248.

13-FEB-1998; 98US-00023129.

(SOND/) SONDEREGGER P.

Sonderegger P, Schrimpf SP, Krueger SR, Osterwalder T;  
 Stoeckli ET;

WPI; 1999-518451/43.

N-PSDB; AAX87830.

Novel neuroserpins useful for treating central nervous system disorders  
 or brain or retinal tumors.

Claim 3; Page 3-5; 55pp; English.

The present sequence represents human neuroserpin, as deduced from cDNA  
 (see AAX87830) isolated from human foetal brain and foetal retina cDNA  
 libraries. Neuroserpins can be used: in the treatment of disorders of the  
 central nervous system, especially disorders of a protease, such as a  
 tissue-type or urokinase-type plasminogen activator (claimed); to  
 minimise tissue destruction in stroke (claimed) including brain

CC infarction and ischaemia, intracerebral haemorrhage and subarachnoid  
 CC haemorrhage, by exerting a protecting effect; to prevent cell death of  
 CC cells of the nervous system (claimed); to treat tissue damage in  
 CC traumatic brain injury, to treat neurodegenerative or neuroinflammatory  
 CC diseases such as multiple sclerosis; to reduce the effects of epilepsy on  
 CC brain tissue; to rescue endangered neurons e.g. in epileptic seizures and  
 CC cancerous neoformations; for axonal regeneration and/or restoration of  
 CC synaptic integrity and function; to prevent or cure retinal degeneration  
 CC or neovascularization; to regenerate injured, damaged, underdeveloped or  
 CC maldeveloped brain tissue and/or nervous tissue; to treat pain; to treat  
 CC psychiatric disorders such as schizophrenia; to treat tumors, including  
 CC the prevention or reduction of the growth, expansion, infiltration and  
 CC the metastasis of primary and metastatic tumors, especially brain tumors  
 CC or tumors of the retina (claimed); and to ameliorate learning and memory  
 CC functions. Neuroserpin proteins and DNA can also be used for the  
 CC screening of drugs against neuroserpin involving disorders, to produce  
 CC antigens and hence raise antibodies, and in the creation of transgenic  
 CC animals

XX SQ Sequence 410 AA;

Query Match 39.8%; Score 791.5; DB 2; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 2.3e-62;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;

QY 6 LWSLLLLFFGSQASRCQAQNTFAVDLYOEVSLSHKD-NIIFSPGILTVLEWVQGA 64  
 DB 6 LFSLLVLQSMATGATFPPEAIALSVNMYNRLATGDEENILFSLIALAMGMELGAQ 65  
 QY 65 GKAOQIQRTLKQOETSAGEEFLVLSFCSAISEKKQEFNFLANALYLOEGFTVKEQYL 124  
 DB 66 GSTQKEIRHSMGVDSLKNGEESFLKFEFSNNVTAKESQYVMKIANSFLVQNGFHVNEEFL 125  
 QY 125 HGNKEPFOAIAKLVDFODAKACAEMLSTWVERKTGKIDMFSGEFGPLTRVLVNAIY 184  
 DB 126 QMKKYFNAAVNVHDFSONVAVNYINKWENNTNLLVDLVSFRDFDAATYALALINAVY 185  
 QY 185 FKGDWKQKFRKEDTQINFTKNGSTVKIPMMKALLRTKYGFSESSLN----YQVLELS 240  
 DB 186 FKGNWKSQFRPENTRFTSKDDESEVOIPDMYQQGEFFYGFSGSNEAGGIYQVLEIP 245  
 QY 241 YKGFDESLIILPAEGNDIEVEKLITAOQILKWLSEMOEVEEISLPKPKVEQKDFKD 300  
 DB 246 YEGDEISMLVLRSQREVPATLPLVKAQLVEEWANSVKQKVEVYLPFTVEQEDLKD 305  
 QY 301 VLXSLNITEIFSGGCDLSGITDSEVVVSQVTKVFEINEDGSEAAATSTGHIPIVMSL 360  
 DB 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAIHKSFLVNEEGSEAAAVSGMTAISRMV 365  
 QY 361 AQSQFIANHPFLFMKINPTESILFMGRVTNP 392  
 DB 366 LYPQVIYVDHPFFFLIRNRTGTILFMGRVWHP 397

RESULT 15

AAY67239  
 ID AAY67239 standard; protein; 410 AA.

XX AC AAY67239;

XX DT 27-MAR-2000 (first entry)

Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator protein.

Brain-associated inhibitor of tissue-type plasminogen activator; BAIT;  
 KW serpin; serine protease inhibitor; brain; human; Alzheimer's disease;  
 KW peripheral neuropathy, multiple sclerosis; memory impairment.

XX OS Homo sapiens.

Key Location/Qualifiers  
 Peptide 1..18  
 /label= signal\_peptide

FT Protein 19. .410  
XX /label= BAIT  
PN US6008020-A.  
XX 28-DEC-1999.  
XX  
XX 10-OCT-1997; 97US-00948997.  
XX  
XX 11-OCT-1996; 96US-0028117P.  
XX  
XX (HUMA-) HUMAN GENOME SCI.  
PA (AMNA-) AMERICAN NAT RED CROSS.  
XX  
XX Lawrence DA, Dillon PJ, Hastings GA, Coleman TA;  
PI  
XX  
XX MPI; 2000-096374/08.  
DR N-PSDB; AAZ56164.  
XX  
XX New nucleic acid encoding human brain-associated inhibitor of tissue-type  
PT plasminogen activator, useful in the diagnosis of various nervous system-  
PT related disorders in mammals.  
XX  
XX Claim 1; Fig 1; 48pp; English.  
XX  
XX This is the human brain-associated inhibitor of tissue-type plasminogen  
CC activator (BAIT) amino acid sequence. BAIT is a member of the serine  
CC protease inhibitor (serpin) family of proteins, and is widely distributed  
CC throughout the brain, but is primarily located in the neurons. A  
CC recombinant vector containing the BAIT nucleotide sequence can be used to  
CC produce a host cell that produces BAIT polypeptide. The BAIT protein  
CC selectively inhibits tissue-type plasminogen activator. The BAIT  
CC polynucleotides and polypeptides are useful in the diagnosis of various  
CC nervous system-related disorders in mammals which include impaired  
CC processes of learning and memory. The impaired spatial, olfactory and  
CC taste aversion learning, learning and memory impairments associated with  
CC Alzheimer's disease can be diagnosed using the BAIT sequences. BAIT  
CC polypeptides and agonists are used for treating an individual in need of  
CC an increased level of BAIT activity. BAIT agonists are also useful for  
CC treating Alzheimer's disease and peripheral neuropathies such as multiple  
CC sclerosis. Motor neuron or sensory neuron damage resulting from spinal  
CC cord injury may also be prevented or treated with BAIT agonists. BAIT  
CC antagonists can be used for treating an individual in need of a decreased  
CC level of BAIT activity  
XX  
XX Sequence 410 AA;

Query Match 39.8%; Score 791.5; DB 3; Length 410;  
Best Local Similarity 39.5%; Pred. No. 2.3e-62;  
Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;

QY 6 LWSLLLLFFGSGQSRCSAQNTPEAVDLYQEVLSHKD-NIIFSPILGITIVLEWVGLGAK 64  
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QY 65 GKAOQQIRQLTKQETSAGBEFLVLSFCSAISEKKEQFTFNLANALYLQEGFTVKEQYL 124  
DB 66 GSTQKEIRHSMGYDSLKNGEFSFLKEFSNMWTAKESQYVMKIANSLFVQNGEHVNEEFL 125  
QY 125 HGNKEFTQSAIKLVDFODAKACAEIMSTWVERKTGKIKDMFSGEEFGPLTRLVLVNAIY 184  
DB 126 QMKKYEFAAVNHVDFSQNAVANYINKVENNTNNLVKDLVSPDFDAATYALINAVY 185  
QY 185 FKGDWKOKFKREDQLNFTKNGSTVTKIPMKALLRTKYGFSESSLN-...YQVLELS 240  
DB 186 FKNWKSQFPENRTFTFTKDESEVQIPMTYQQGEFFYGFSGSNEAGGIYQVLEIP 245  
QY 241 YKGDEFSLIILPAEGMDIEBEVKLITAAQQLKWLSEMGEVEIISLPFKVEKQVDFKD 300  
DB 246 YEGDEISMWLVLSKQEVPLATLEPLVKAQLVEEWANSVKQKVEVYLPRFTVEQEI LKD 305  
QY 301 VLYSLNITEIFSGCDLSGIDTSDEVYVSQVTKVFEINEDGSEATSTGHIPIVMSL 360

Db 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAIHKSFLFVNEEGSEAAAASGWIASRMAY 365  
QY 361 ACSQFIANHPFLFIMKHNPFTESILFMGRVYTNP 392  
Db 366 LYPQVIVDHPPEFFLIRNRRTGTILFMGRVWHP 397

Search completed: October 21, 2004, 06:42:08  
Job time : 72 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 21, 2004, 06:45:37 ; Search time 131 Seconds

(without alignments)  
968,804 Million cell updates/sec

Title: US-10-628-395-2

Perfect score: 1987

Sequence: 1 MDTIFLMSLLFFGQASR.....FIMKHNPESILFMGRVTNP 392

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1364641 seqs, 323758627 residues

Total number of hits satisfying chosen parameters: 1364641

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA.\*

- 1: /cgn2\_6/ptodata1/pubpaa/us07\_PUBCOMB.pep.\*
- 2: /cgn2\_6/ptodata1/pubpaa/PCT\_NEW PUB.pep.\*
- 3: /cgn2\_6/ptodata1/pubpaa/US06\_NEW PUB.pep.\*
- 4: /cgn2\_6/ptodata1/pubpaa/US06\_PUBCOMB.pep.\*
- 5: /cgn2\_6/ptodata1/pubpaa/US07\_NEW PUB.pep.\*
- 6: /cgn2\_6/ptodata1/pubpaa/PCTUS\_PUBCOMB.pep.\*
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- 19: /cgn2\_6/ptodata1/pubpaa/US10H\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1987	100.0	392	9	US-09-902-684-2
2	1987	100.0	392	15	US-10-628-395-2
3	1987	100.0	405	9	US-09-902-684-13
4	1987	100.0	405	15	US-10-628-395-13
5	791.5	39.8	410	9	US-09-957-485-2
6	791.5	39.8	410	9	US-09-987-021-2
7	791.5	39.8	410	15	US-10-355-208-2
8	791.5	39.8	410	17	US-10-752-041-2
9	788.5	39.7	410	9	US-09-957-485-3
10	788.5	39.7	410	9	US-09-987-021-3
11	788.5	39.7	410	15	US-10-355-208-3
12	788.5	39.7	410	17	US-10-752-041-3
13	706	35.5	360	14	US-10-023-634-88
14	706	35.5	360	15	US-10-037-417-67

15	679.5	34.2	377	10	US-09-823-187-31	Sequence 31, Appl
16	673.5	33.9	371	14	US-10-023-634-87	Sequence 87, Appl
17	673.5	33.9	377	15	US-10-037-417-66	Sequence 66, Appl
18	656	33.0	390	8	US-08-731-566-2	Sequence 2, Appl
19	650	32.7	390	10	US-09-823-187-29	Sequence 29, Appl
20	649	32.7	390	10	US-09-823-187-30	Sequence 30, Appl
21	649	32.7	390	14	US-10-094-944-12	Sequence 12, Appl
22	649	32.7	390	15	US-10-037-417-65	Sequence 65, Appl
23	649	32.7	390	16	US-10-652-705-3	Sequence 3, Appl
24	649	32.7	390	16	US-10-766-778-9	Sequence 9, Appl
25	636	32.0	390	10	US-09-823-187-27	Sequence 27, Appl
26	636	32.0	390	14	US-10-094-944-13	Sequence 13, Appl
27	636	32.0	390	14	US-10-295-027-177	Sequence 177, Appl
28	636	32.0	390	14	US-10-295-027-794	Sequence 794, Appl
29	636	32.0	390	16	US-10-652-705-4	Sequence 4, Appl
30	636	32.0	390	16	US-10-766-778-10	Sequence 10, Appl
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32	611.5	30.8	379	14	US-10-023-634-85	Sequence 85, Appl
33	611.5	30.8	395	10	US-09-823-187-2	Sequence 2, Appl
34	609.5	30.7	379	14	US-10-023-634-86	Sequence 86, Appl
35	607	30.5	394	15	US-10-258-951-59	Sequence 59, Appl
36	604	30.4	378	14	US-10-023-634-84	Sequence 84, Appl
37	603.5	30.4	405	14	US-10-023-634-82	Sequence 82, Appl
38	598	30.1	378	15	US-10-467-042-15	Sequence 15, Appl
39	595	29.9	459	9	US-09-925-300-1440	Sequence 1440, Ap
40	591.5	29.8	425	14	US-10-113-113-2	Sequence 2, Appl
41	591.5	29.8	425	14	US-10-094-944-2	Sequence 2, Appl
42	591.5	29.8	425	14	US-10-419-277-2	Sequence 67, Appl
43	588	29.6	392	14	US-10-198-070-67	Sequence 70, Appl
44	587	29.5	392	14	US-10-198-070-70	Sequence 62, Appl
45	582	29.3	392	14	US-10-198-070-62	

ALIGNMENTS

RESULT 1  
US-09-902-684-2  
; Sequence 2, Application US/09902684  
; Patent No. US20020127640A1  
; GENERAL INFORMATION:  
; APPLICANT: Ni et al.  
; TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
; INHIBITOR  
; NUMBER OF SEQUENCES: 15  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
; STREET: 1100 NEW YORK AVENUE, SUITE 600  
; CITY: WASHINGTON  
; STATE: DC  
; COUNTRY: USA  
; ZIP: 20005-3934  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/902,684  
; FILING DATE: 12-Jul-2001  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/026,408  
; FILING DATE: <Unknown>  
; APPLICATION NUMBER: US 60/024,056  
; FILING DATE: 16-AUG-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: STEFFE, ERIC K.  
; REGISTRATION NUMBER: 36,688  
; REFERENCE/DOCKET NUMBER: 1488.0300002  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 202-371-2600  
; TELEFAX: 202-371-2540

INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 392 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-09-902-684-2

Query Match 100.0%; Score 1987; DB 9; Length 392;  
Best Local Similarity 100.0%; Pred. No. 6.5e-156;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MDIFLWSLLLLPFGSQASCSAQKNTFAVDLYQVSLSHKDNIIFFSLGITLVLEWVQ 60

QY 61 LGAKGAAQQIROTLLKQETSAGEEFLVLSFCSAISEKKQETFFNLANALYQEGFTVK 120  
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DB 121 EQLHGNKEFFQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMPSGEFGPLTRVLV 180

QY 181 NAIYFGDMQKQKFKEDTQLINFTKNGSTVKIPMMKALLRTKYGYFSSSLNYQVLELS 240  
DB 181 NAIYFGDMQKQKFKEDTQLINFTKNGSTVKIPMMKALLRTKYGYFSSSLNYQVLELS 240

QY 241 YKGEFSLIIILPAEGMDIEVEKLITAOQILKWLSEMQEEVEISLPFKVEQKVDK 300  
DB 241 YKGEFSLIIILPAEGMDIEVEKLITAOQILKWLSEMQEEVEISLPFKVEQKVDK 300

QY 301 VLXSLNITEIFSGCDLSGITDSSEVYVSVQTKVFFNEGSEAAATSTGHIPIVMSL 360  
DB 301 VLXSLNITEIFSGCDLSGITDSSEVYVSVQTKVFFNEGSEAAATSTGHIPIVMSL 360

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DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 2  
US-10-628-395-2  
Sequence 2, Application US/10628395  
Publication No. US20040086978A1  
GENERAL INFORMATION:  
APPLICANT: Ni et al.  
TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
INHIBITOR  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-3934  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/628,395  
FILING DATE: 29-Jul-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/026,408  
FILING DATE: 19-FEB-2001  
APPLICATION NUMBER: US 08/934,011  
FILING DATE: 15-AUG-1997  
APPLICATION NUMBER: US 60/024,056

FILING DATE: 16-AUG-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: STEFFE, ERIC K.  
REGISTRATION NUMBER: 36,688  
REFERENCE/DOCKET NUMBER: 1488.0300002  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 392 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
US-10-628-395-2

Query Match 100.0%; Score 1987; DB 15; Length 392;  
Best Local Similarity 100.0%; Pred. No. 6.5e-156;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 121 EQLHGNKEFFQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMPSGEFGPLTRVLV 180  
DB 121 EQLHGNKEFFQSAIKLVDFQDAKACAEIMSTWVERKTGKI KDMPSGEFGPLTRVLV 180

QY 181 NAIYFGDMQKQKFKEDTQLINFTKNGSTVKIPMMKALLRTKYGYFSSSLNYQVLELS 240  
DB 181 NAIYFGDMQKQKFKEDTQLINFTKNGSTVKIPMMKALLRTKYGYFSSSLNYQVLELS 240

QY 241 YKGEFSLIIILPAEGMDIEVEKLITAOQILKWLSEMQEEVEISLPFKVEQKVDK 300  
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QY 301 VLXSLNITEIFSGCDLSGITDSSEVYVSVQTKVFFNEGSEAAATSTGHIPIVMSL 360  
DB 301 VLXSLNITEIFSGCDLSGITDSSEVYVSVQTKVFFNEGSEAAATSTGHIPIVMSL 360

QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
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RESULT 3  
US-09-902-684-13  
Sequence 13, Application US/09902684  
Patent No. US20020127640A1  
GENERAL INFORMATION:  
APPLICANT: Ni et al.  
TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
INHIBITOR  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-3934  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/902,684

FILING DATE: 12-Jul-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/026,408  
FILING DATE: <Unknown>  
APPLICATION NUMBER: US 60/024,056  
FILING DATE: 16-AUG-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: STEFFE, ERIC K.  
REGISTRATION NUMBER: 36,688  
REFERENCE/DOCKET NUMBER: 1488.03000002  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-09-902-684-13

Query Match 100.0%; Score 1987; DB 9; Length 405;  
Best Local Similarity 100.0%; Pred. No. 6.8e-156;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLGTLVLEWVQ 60

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DB 181 NAIYFGDWKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGVSSESLNYQVLELS 240

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DB 241 YKGDEFSLIILPAEGMDIEVEKLITAAQILKWLSEMQEVEEISLPRFKEQKVDPK 300

QY 301 VLXSLNITEIFSGGCDLSGITSSEVYVSQVTKQVFFNEEDGSEAAATSGIHIPVIMSL 360  
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RESULT 4  
US-10-628-395-13  
Sequence 13 Application US/10628395  
Publication No US20040086978A1  
GENERAL INFORMATION:  
APPLICANT: Ni et al.  
TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR INHIBITOR  
NUMBER OF SEQUENCES: 15  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: STERN, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
STREET: 1100 NEW YORK AVENUE, SUITE 600  
CITY: WASHINGTON  
STATE: DC  
COUNTRY: USA  
ZIP: 20005-3934  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/628,395  
FILING DATE: 29-Jul-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/09/026,408  
FILING DATE: 19-FEB-2001  
APPLICATION NUMBER: US 08/934,011  
FILING DATE: 15-AUG-1997  
APPLICATION NUMBER: US 60/024,056  
FILING DATE: 16-AUG-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: STEFFE, ERIC K.  
REGISTRATION NUMBER: 36,688  
REFERENCE/DOCKET NUMBER: 1488.03000002  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-371-2600  
TELEFAX: 202-371-2540  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 405 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
US-10-628-395-13

Query Match 100.0%; Score 1987; DB 15; Length 405;  
Best Local Similarity 100.0%; Pred. No. 6.8e-156;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLGTLVLEWVQ 60

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DB 241 YKGDEFSLIILPAEGMDIEVEKLITAAQILKWLSEMQEVEEISLPRFKEQKVDPK 300

QY 301 VLXSLNITEIFSGGCDLSGITSSEVYVSQVTKQVFFNEEDGSEAAATSGIHIPVIMSL 360  
DB 301 VLXSLNITEIFSGGCDLSGITSSEVYVSQVTKQVFFNEEDGSEAAATSGIHIPVIMSL 360

QY 361 AQSOFIANHPFLFMKHNPTESILFMGRVTNP 392  
DB 361 AQSOFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 5  
US-09-957-485-2  
Sequence 2 Application US/09957485  
Patent No. US20020143165A1  
GENERAL INFORMATION:  
APPLICANT: Human Genome Sciences, Inc. et al.  
TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator  
FILE REFERENCE: PF336P1

; CURRENT APPLICATION NUMBER: US/09/957,485  
 ; CURRENT FILING DATE: 2001-09-21  
 ; PRIOR APPLICATION NUMBER: US 09/521,664  
 ; PRIOR FILING DATE: 2000-03-08  
 ; PRIOR APPLICATION NUMBER: US 60/123,704  
 ; PRIOR FILING DATE: 1999-03-10  
 ; NUMBER OF SEQ ID NOS: 21  
 ; SOFTWARE: Patent In Ver. 2.1  
 ; SEQ ID NO 2  
 ; LENGTH: 410  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-09-957-485-2

Query Match 39.8%; Score 791.5; DB 9; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 5.8e-57;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
 QY 6 LWSLLLLFFGQSARCSAQNTEFAVDLYQEVLSHKD-NIIFSPGLGITLVLEMVQLGAK 64  
 Db 6 LFSLLVLQSMATGATPPEEAIALDSVMNVRNLRATGEDENILFSPLSIALANGMELGAQ 65  
 QY 65 GKAAQQIROTLLKQOETSAGEEFLVLSKSPCSAISSEKKEFTFNLANALYLQEGTVKEQYL 124  
 Db 66 GSTQKEIRHSMGYDSLKNGEESFLKESFNMTAKESQYVMKIANSLFVQNGFHVNEEFL 125  
 QY 125 HGNKEFFQSAIKLVDFQDAXACAEIMSTWVERKTGKIKDMFSGEEFGPLTRVLVNAIY 184  
 Db 126 QMKKYNFAAIVNHVDFSONVAVANYINKVNNNTNNLVKDLVSPRDFDAATYLLALINAVY 185  
 QY 185 FKGDWKKFRKEDTQNLNFTKNGSTVKIPMKALLRTKYGVFSESSLN- ---YQVLELS 240  
 Db 186 FKGNWKSQFPENRTFTSKDDESEVOIPMMYQQGEFYFGFSGSNEAGGIYQVLEIP 245  
 QY 241 YKGFESLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEEISLPRFKVEQKVDKFD 300  
 Db 246 YEGDEISMLVLRSQEVPLATLEPLVKAQLVEBANSVKQKVEVYLPRTVEQEDLKD 305  
 QY 301 VLYSLNITEIFSGCDLGSITDSSEVYVSVQTKVFFNEEDGSEAASTGTGHIPIVMSL 360  
 Db 306 VLKALGITEIFKIDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIATSRMAV 365  
 QY 361 AQOQFIANHPFLFMKHNPTESILFMGRVTNP 392  
 Db 366 LYPQIVVDHPPFLIRNRRTGTLFMGRVWHP 397

RESULT 6  
 US-09-957-021-2  
 ; Sequence 2, Application US/09987021  
 ; Patent No. US20020165147A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Yeses, et al.  
 ; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator  
 ; FILE REFERENCE: PF336P2  
 ; CURRENT APPLICATION NUMBER: US/09/987,021  
 ; CURRENT FILING DATE: 2001-11-13  
 ; PRIOR APPLICATION NUMBER: 09/957,485  
 ; PRIOR FILING DATE: 2001-09-21  
 ; PRIOR APPLICATION NUMBER: 09/722,292  
 ; PRIOR FILING DATE: 2000-11-28  
 ; PRIOR APPLICATION NUMBER: 60/247,971  
 ; PRIOR FILING DATE: 2000-11-14  
 ; PRIOR APPLICATION NUMBER: 09/521,664  
 ; PRIOR FILING DATE: 2000-03-08  
 ; PRIOR APPLICATION NUMBER: 09/348,817  
 ; PRIOR FILING DATE: 1999-07-08  
 ; PRIOR APPLICATION NUMBER: 60/123,704  
 ; PRIOR FILING DATE: 1999-03-10  
 ; PRIOR APPLICATION NUMBER: 08/948,997  
 ; PRIOR FILING DATE: 1997-10-10  
 ; PRIOR APPLICATION NUMBER: 60/028,117  
 ; PRIOR FILING DATE: 1996-10-11

; NUMBER OF SEQ ID NOS: 18  
 ; SOFTWARE: Patent In Ver. 2.1  
 ; SEQ ID NO 2  
 ; LENGTH: 410  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-09-987-021-2

Query Match 39.8%; Score 791.5; DB 9; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 5.8e-57;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
 QY 6 LWSLLLLFFGQSARCSAQNTEFAVDLYQEVLSHKD-NIIFSPGLGITLVLEMVQLGAK 64  
 Db 6 LFSLLVLQSMATGATPPEEAIALDSVMNVRNLRATGEDENILFSPLSIALANGMELGAQ 65  
 QY 65 GKAAQQIROTLLKQOETSAGEEFLVLSKSPCSAISSEKKEFTFNLANALYLQEGTVKEQYL 124  
 Db 66 GSTQKEIRHSMGYDSLKNGEESFLKESFNMTAKESQYVMKIANSLFVQNGFHVNEEFL 125  
 QY 125 HGNKEFFQSAIKLVDFQDAXACAEIMSTWVERKTGKIKDMFSGEEFGPLTRVLVNAIY 184  
 Db 126 QMKKYNFAAIVNHVDFSONVAVANYINKVNNNTNNLVKDLVSPRDFDAATYLLALINAVY 185  
 QY 185 FKGDWKKFRKEDTQNLNFTKNGSTVKIPMKALLRTKYGVFSESSLN- ---YQVLELS 240  
 Db 186 FKGNWKSQFPENRTFTSKDDESEVOIPMMYQQGEFYFGFSGSNEAGGIYQVLEIP 245  
 QY 241 YKGFESLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEEISLPRFKVEQKVDKFD 300  
 Db 246 YEGDEISMLVLRSQEVPLATLEPLVKAQLVEBANSVKQKVEVYLPRTVEQEDLKD 305  
 QY 301 VLYSLNITEIFSGCDLGSITDSSEVYVSVQTKVFFNEEDGSEAASTGTGHIPIVMSL 360  
 Db 306 VLKALGITEIFKIDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIATSRMAV 365  
 QY 361 AQOQFIANHPFLFMKHNPTESILFMGRVTNP 392  
 Db 366 LYPQIVVDHPPFLIRNRRTGTLFMGRVWHP 397

RESULT 7  
 US-10-355-208-2  
 ; Sequence 2, Application US/10355208  
 ; Publication No. US2004003880A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Human Genome Sciences, Inc. et al.  
 ; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator  
 ; FILE REFERENCE: PF336P1  
 ; CURRENT APPLICATION NUMBER: US/10/355,208  
 ; CURRENT FILING DATE: 2003-01-31  
 ; PRIOR APPLICATION NUMBER: US/09/521,664  
 ; PRIOR FILING DATE: 2000-03-08  
 ; PRIOR APPLICATION NUMBER: US 60/123,704  
 ; PRIOR FILING DATE: 1999-03-10  
 ; NUMBER OF SEQ ID NOS: 21  
 ; SOFTWARE: Patent In Ver. 2.1  
 ; SEQ ID NO 2  
 ; LENGTH: 410  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-10-355-208-2

Query Match 39.8%; Score 791.5; DB 15; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 5.8e-57;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
 QY 6 LWSLLLLFFGQSARCSAQNTEFAVDLYQEVLSHKD-NIIFSPGLGITLVLEMVQLGAK 64  
 Db 6 LFSLLVLQSMATGATPPEEAIALDSVMNVRNLRATGEDENILFSPLSIALANGMELGAQ 65  
 QY 65 GKAAQQIROTLLKQOETSAGEEFLVLSKSPCSAISSEKKEFTFNLANALYLQEGTVKEQYL 124



Db 66 GSTQKEIRHSMGYDSLKNGEBSFLKFSNMTAKESQYVMKIANSLFVQNGFHYNEBFL 125  
Qy 125 HGNKEFFQSAIKLVDFQDAXACAEMISTWVERKTGKIKDMPSGEEFGLTRILVLNAYI 184  
Db 126 QMCKKYFNAVNVHVDVFSQVAVANYINKWVNTNNLVKDLVSPRDFDAATYLLALINAVY 185  
Qy 185 FKGDWKQKFKEDTQJLINFYKNGSTVKIPMKALLRTKYGYFSSSLN---YQVLELS 240  
Db 186 FGNWKSQRPENTRTFTSKDDESEVQIPMMYQOGEFYFGSDGSNEAGGIYQVLEIP 245  
Qy 241 YKGFDEFSLLIIPAEQMDIEBEVKLIITAOQILKWLSEMQEEVEISLPRFKVQKVDKFD 300  
Db 246 YEGDEISMLVLSRQEVPLATLEPLVKAQVVEWANSVKQKVEVYLPRFTVQEIDLKD 305  
Qy 301 VLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFEINEDGSEAAATSTGHIHPVIMSL 360  
Db 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIAISRMAY 365  
Qy 361 AQSOFTIANHPFLFMKHNPTESILFMGRVTNP 392  
Db 366 LYPOQVVDHPFFFLIRNRRTGTLFMGRVWHP 397

RESULT 8  
US-10-752-041-2  
; Sequence 2, Application US/10752041  
; Publication No. US20040203101A1  
; GENERAL INFORMATION:  
; APPLICANT: Hastings, et al.  
; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator  
; FILE REFERENCE: PF336P3  
; CURRENT APPLICATION NUMBER: US/10/752,041  
; CURRENT FILING DATE: 2004-01-07  
; PRIOR APPLICATION NUMBER: 10/355,208  
; PRIOR FILING DATE: 2003-01-31  
; PRIOR APPLICATION NUMBER: 09/987,021  
; PRIOR FILING DATE: 2001-11-13  
; PRIOR APPLICATION NUMBER: 09/957,485  
; PRIOR FILING DATE: 2001-09-21  
; PRIOR APPLICATION NUMBER: 09/722,292  
; PRIOR FILING DATE: 2000-11-28  
; PRIOR APPLICATION NUMBER: 60/247,971  
; PRIOR FILING DATE: 2000-11-14  
; PRIOR APPLICATION NUMBER: 09/521,664  
; PRIOR FILING DATE: 2000-03-08  
; PRIOR APPLICATION NUMBER: 09/348,817  
; PRIOR FILING DATE: 1999-07-08  
; PRIOR APPLICATION NUMBER: 60/123,704  
; PRIOR FILING DATE: 1999-03-10  
; PRIOR APPLICATION NUMBER: 08/948,997  
; PRIOR FILING DATE: 1997-10-10  
; PRIOR APPLICATION NUMBER: 60/028,117  
; PRIOR FILING DATE: 1996-10-11  
; NUMBER OF SEQ ID NOS: 21  
; SOFTWARE: Patent in Ver. 2.1  
; SEQ ID NO 2  
; LENGTH: 410  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-10-752-041-2

Query Match 39.8%; Score 791.5; DB 17; Length 410;  
Best Local Similarity 35.5%; Pred. No. 5:8e-57;  
Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
Qy 6 LWSLLLFQGSQASRCQAQNT--EFAVDLYQVLSLHKD--NIIFSPGLTILVLEVMQV 64  
Db 6 LFSLLVQSMATGATFPEEAIADLSVNNYRNRATGDENILFSPISIALAMGMELGAQ 65  
Qy 65 GKAAQQIIRQTLKQETSAGBEFLVKSFCSAISEKKQBEFTNLNANALYQEGFTVKEYL 124  
Db 66 GSTQKEIRHSMGYDSLKNGEBSFLKFSNMTAKESQYVMKIANSLFVQNGFHYNEBFL 125

Qy 125 HGNKEFFQSAIKLVDFQDAXACAEMISTWVERKTGKIKDMPSGEEFGLTRILVLNAYI 184  
Db 126 QMCKKYFNAVNVHVDVFSQVAVANYINKWVNTNNLVKDLVSPRDFDAATYLLALINAVY 185  
Qy 185 FKGDWKQKFKEDTQJLINFYKNGSTVKIPMKALLRTKYGYFSSSLN---YQVLELS 240  
Db 186 FGNWKSQRPENTRTFTSKDDESEVQIPMMYQOGEFYFGSDGSNEAGGIYQVLEIP 245  
Qy 241 YKGFDEFSLLIIPAEQMDIEBEVKLIITAOQILKWLSEMQEEVEISLPRFKVQKVDKFD 300  
Db 246 YEGDEISMLVLSRQEVPLATLEPLVKAQVVEWANSVKQKVEVYLPRFTVQEIDLKD 305  
Qy 301 VLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFEINEDGSEAAATSTGHIHPVIMSL 360  
Db 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIAISRMAY 365  
Qy 361 AQSOFTIANHPFLFMKHNPTESILFMGRVTNP 392  
Db 366 LYPOQVVDHPFFFLIRNRRTGTLFMGRVWHP 397

RESULT 9  
US-09-957-485-3  
; Sequence 3, Application US/09957485  
; Patent No. US20020143165A1  
; GENERAL INFORMATION:  
; APPLICANT: Human Genome Sciences, Inc. et al.  
; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen Activator  
; FILE REFERENCE: PF336P1  
; CURRENT APPLICATION NUMBER: US/09/957,485  
; CURRENT FILING DATE: 2001-09-21  
; PRIOR APPLICATION NUMBER: US 09/521,664  
; PRIOR FILING DATE: 2000-03-08  
; PRIOR APPLICATION NUMBER: US 60/123,704  
; PRIOR FILING DATE: 1999-03-10  
; NUMBER OF SEQ ID NOS: 21  
; SOFTWARE: Patent in Ver. 2.1  
; SEQ ID NO 3  
; LENGTH: 410  
; TYPE: PRT  
; ORGANISM: Gallus gallus  
US-09-957-485-3

Query Match 39.7%; Score 788.5; DB 9; Length 410;  
Best Local Similarity 40.0%; Pred. No. 1e-56;  
Matches 158; Conservative 92; Mismatches 138; Indels 7; Gaps 3;  
Qy 5 FLWSLLLFQGSQASRCQAQNT--EFAVDLYQVLSLHKD--NIIFSPGLTILVLEVMQV 61  
Db 3 FLGLLSLLVLPSPKAFKTFPDTIAELSVNYYNQLRAAREDENILFCPLSIAIANGMIEL 62  
Qy 62 GAKGAQQIIRQTLKQETSAGBEFLVKSFCSAISEKKQBEFTNLNANALYQEGFTVKE 121  
Db 63 GAHGTTLKEIRHSLGFDLSKNGEBSFLKDLSDMATTEESHYLVNMANSLYVQNGFHYSE 122  
Qy 122 QYLHGNKEFFQSAIKLVDFQDAXACAEMISTWVERKTGKIKDMPSGEEFGLTRILVLN 181  
Db 123 KFLQVLVKYFRAEVENIDFSQSAVATHINKVENVHTNNMIKDFVSSRDFSLALHVLIN 182  
Qy 182 AIYFKGDWKQKFKEDTQJLINFYKNGSTVKIPMKALLRTKYGYFSSSLN---YQV 237  
Db 183 AIYFGNWKSOFRPENTRTFTSKDDESEVQIPMMYQOGEFYFGSDGSNEAGGIYQV 242  
Qy 238 ELSYKGDGDEFSLLIIPAEQMDIEBEVKLIITAOQILKWLSEMQEEVEISLPRFKVQKVD 297  
Db 243 EIPYEGDEISMLVLSRQEVPLATLEPLVKAQVVEWANSVKQKVEVYLPRFTVQEID 302  
Qy 298 FKDVLYSLNITEIFSGGCDLSGTDSEVYVSQVTKVFEINEDGSEAAATSTGHIHPV 357  
Db 303 LKDVLLKGLGITEVFSRDLTAMSDNKEILYAKAFHKAFLVNEEGSEAAVSGMIAISR 362  
Qy 358 MSLAQSOFTIANHPFLFMKHNPTESILFMGRVTNP 392



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; PRIOR APPLICATION NUMBER: 09/521,664
; PRIOR FILING DATE: 2000-03-08
; PRIOR APPLICATION NUMBER: 09/348,817
; PRIOR FILING DATE: 1999-07-08
; PRIOR APPLICATION NUMBER: 60/123,704
; PRIOR FILING DATE: 1999-03-10
; PRIOR APPLICATION NUMBER: 08/948,997
; PRIOR FILING DATE: 1997-10-10
; PRIOR APPLICATION NUMBER: 60/028,117
; PRIOR FILING DATE: 1996-10-11
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: Patent in Ver. 2.1
; SEQ ID NO 3
; LENGTH: 410
; TYPE: PRT
; ORGANISM: Gallus gallus
US-10-752-041-3

Query Match      39.7%; Score 788.5; DB 17; Length 410;
Best Local Similarity 40.0%; Pred. No. 1e-56;
Matches 158; Conservative 92; Mismatches 138; Indels 7; Gaps 3;

QY 5 FLWSLLLLFFGSOARCSAQKNT--EFAVDLYQEVSLSHKD-NIIFSPGLGITLVLEMVOL 61
Db 3 FLGLSLLVLPKAKFTNPDDETIASLSVNVYNQLRAEDENILFCPLSIATAMGMIEL 62

QY 62 GAKGKAAQOIROTLKQOETSAGEBEFLVLKSCFSAISEKKQOFTFNLANALYLQEGFTVKE 121
Db 63 GAGHTLKEIRSLGDFSLKNGEEFTFLKDLSDMATTESHSYVLNMANSLYVQNGPVSVE 122

QY 122 QVLHGNKEFFQSAIKLVFPQDACAEMISTWVERKTDGKIKDMFSGEEFGPLTRVLVN 181
Db 123 KFLQLVKYFKAIVENIDFSQSAVAATHINKVVENHTNNMIKDFVSSRDPSTALHVLIN 182

QY 182 ATYFKGDWQKFKREDTQNLNFTKNGSTVKIPMKALLRTKYGYFSESLN----YQVL 237
Db 183 ATYFKGNWKSQRPENTFTSFKDDETEVOIPMYOGEFYGEFGSDGNEAGGIYQVL 242

QY 238 ELSYKGDPESLIILPAEGMDIEVEKLIITAQOILKWLSEMQEVEVEISLPRFKVQKVD 297
Db 243 EIPYGEDEISMMVLSRQEVPLVLEPLVKASLINEWANSYKQKVEYVLPRTVQGEID 302

QY 298 FQDVLVSLNITIFSGCDLSGITSSEVYVSQVTKVFEINBDGSEATSTGHIHPVI 357
Db 303 LKDVLRGLGITEVFRSADLTANSONKSLYAKAFKAFLEVNNEEGSEAAAAAGMTAISR 362

QY 358 MSIAOSQFIANHPFLFMKNPTEISILPMGRVTNP 392
Db 363 MAVLYPQVIVDHPFFFLVNRRTGTGVLPMGRVWHP 397

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RESULT 13

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US-10-023-634-88
; Sequence 88, Application US/10023634
; Publication No. US20030236389A1
; GENERAL INFORMATION:
; APPLICANT: Shimkets, Richard A
; APPLICANT: Colman, Steven D
; APPLICANT: Saytek, Kimberly A
; APPLICANT: Ballinger, Robert A
; APPLICANT: Guo, Xiaojia
; APPLICANT: Tchernev, Velizar T
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Li, Li
; APPLICANT: Ellerman, Karen
; APPLICANT: Zerbussen, Bryan D
; APPLICANT: Patturajan, Meera
; APPLICANT: Casman, Stacie J
; APPLICANT: Boldog, Ferenc
; APPLICANT: Gusev, Vladimir Y
; APPLICANT: Burgess, Catherine E
; APPLICANT: Edinger, Shlomit R
; APPLICANT: Gangolli, Esha A

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; APPLICANT: Malyankar, Uriel M
; APPLICANT: Gunther, Erik
; APPLICANT: Smithson, Glennda
; APPLICANT: Millett, Isabelle
; APPLICANT: Gerlach, Valerie
; TITLE OF INVENTION: Proteins, polynucleotides Encoding Them and Methods of
; TITLE OF INVENTION: Using the Same
; FILE REFERENCE: 21402-221
; CURRENT APPLICATION NUMBER: US/10/023,634
; CURRENT FILING DATE: 2002-06-28
; PRIOR APPLICATION NUMBER: 60/256,025
; PRIOR FILING DATE: 2000-12-15
; PRIOR APPLICATION NUMBER: 60/265,163
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: 60/272,929
; PRIOR FILING DATE: 2001-03-02
; PRIOR APPLICATION NUMBER: 60/274,864
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: 60/276,688
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/277,880
; PRIOR FILING DATE: 2001-03-22
; PRIOR APPLICATION NUMBER: 60/286,409
; PRIOR FILING DATE: 2001-04-25
; PRIOR APPLICATION NUMBER: 60/309,246
; PRIOR FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: 60/315,600
; PRIOR FILING DATE: 2001-08-29
; NUMBER OF SEQ ID NOS: 132
; SOFTWARE: Patent in Ver. 2.1
; SEQ ID NO 88
; LENGTH: 360
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-023-634-88

Query Match      35.5%; Score 706; DB 14; Length 360;
Best Local Similarity 43.3%; Pred. No. 5.8e-50;
Matches 158; Conservative 66; Mismatches 131; Indels 10; Gaps 8;

QY 32 DLVQEVSLSHKD-NIIFSPGLGITLVLEMVOLGAKGKAAQOQIRQL--KQOETSAGEEFLV 88
Db 2 DLYKELAKESPDKNIFSPVSISSALANLSLGAAGTATQILEVLGNUTETSEADIHQG 61

QY 89 LKSFCSAISEKKQOFTFNLANALYLQEGFTVKEQVYLHGNKEFFQSAIKLVDFQD-AKACA 147
Db 62 FOHLHLNRPDNKLOLKTANALFVDKSLKLLDSFLEDVKLYGAEVQVDFSDPAEBAK 121

QY 148 EMISTWVERKTDGKIKDMFSGEEFGPLTRVLVNAIYFKGDKQKFKREDTQNLNFTKKN 207
Db 122 KQINDWVKKTKQKIKDLIS--DLDPDTRVLVNAIYFKGKWKTFDPDENTREDFYVDE 179

QY 208 GSTVKIPMKALLRTKYGYFSESLNLYQVLEISYKGDPESLIILPAEGMDIEVEKLIIT 267
Db 180 TTTVKVPMNSQTGRT-FRYGRDEELNCQVLELPPYKGA-SMLIILPDEG-GLETVEKALT 236

QY 268 AQOILKWLSEMQEVEVEISLPRFKVQKVDKDLVLSLNIITIFSGCDLSGITSSEVY 327
Db 237 PETLKKWTKSLTKRSVELYLPKFKLSISYDLKDLVKLGITDLFSNKADLSISDKDLK 296

QY 328 VSQVTKVFEINBDGSEATSTGHIHPVIMSLAOSQFIANHPFLFMKNPTEISILPMG 387
Db 297 VSKVHVKAFLEVNNEEGTEAAATGV-IIVPRSLPPPEFKANRPFLLIRDNPTGSLPMG 355

QY 388 RVNTP 392
Db 356 KVNP 360

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RESULT 14

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US-10-037-417-67
; Sequence 67, Application US/10037417
; Publication No. US20040052806A1

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GENERAL INFORMATION:  
 APPLICANT: Kekuda, Ramesh  
 APPLICANT: Alsbrook II, John P  
 APPLICANT: Tchernev, Velizar T  
 APPLICANT: Liu, Xiaohong  
 APPLICANT: Spytak, Kimberly A  
 APPLICANT: Patturajan, Meera  
 APPLICANT: Grosse, William M  
 APPLICANT: Lepley, Denise M  
 APPLICANT: Burgess, Catherine E  
 APPLICANT: Vernet, Corine A.M.  
 APPLICANT: Li, Li  
 APPLICANT: Gorman, Linda  
 APPLICANT: Edinger, Shlomit R  
 APPLICANT: Sciore, Paul  
 APPLICANT: Ellerman, Karen  
 APPLICANT: Malyankar, Uriel M  
 APPLICANT: Rothenberg, Mark  
 APPLICANT: Stone, David J  
 APPLICANT: Boldog, Ferenc L  
 APPLICANT: Guo, Xiaojia  
 APPLICANT: Shenoy, Suresh G  
 APPLICANT: Anderson, David W  
 APPLICANT: Padigaru, Muralidhara  
 APPLICANT: Taupier Jr, Raymond J  
 APPLICANT: Miller, Charles E  
 APPLICANT: Eissen, Andrew J  
 TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same  
 FILE REFERENCE: 21402-235  
 CURRENT APPLICATION NUMBER: US/10/037,417  
 CURRENT FILING DATE: 2002-09-20  
 PRIOR APPLICATION NUMBER: 60/260,018  
 PRIOR FILING DATE: 2001-01-05  
 PRIOR APPLICATION NUMBER: 60/260,360  
 PRIOR FILING DATE: 2001-01-08  
 PRIOR APPLICATION NUMBER: 60/272,411  
 PRIOR FILING DATE: 2001-02-28  
 PRIOR APPLICATION NUMBER: 60/272,817  
 PRIOR FILING DATE: 2001-03-02  
 PRIOR APPLICATION NUMBER: 60/291,186  
 PRIOR FILING DATE: 2001-05-15  
 PRIOR APPLICATION NUMBER: 60/303,231  
 PRIOR FILING DATE: 2001-07-05  
 PRIOR APPLICATION NUMBER: 60/305,060  
 PRIOR FILING DATE: 2001-07-12  
 PRIOR APPLICATION NUMBER: 60/318,405  
 PRIOR FILING DATE: 2001-09-10  
 PRIOR APPLICATION NUMBER: 60/318,700  
 PRIOR FILING DATE: 2001-09-12  
 NUMBER OF SEQ ID NOS: 227  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 67  
 LENGTH: 360  
 TYPE: PRT  
 ORGANISM: Artificial Sequence  
 FEATURE:  
 OTHER INFORMATION: Description of Artificial Sequence: Serpin  
 OTHER INFORMATION: Consensus Sequence

US-10-037-67

Query Match 35.5%; Score 706; DB 15; Length 360;  
 Best Local Similarity 43.3%; Pred. No. 5.8e-50;  
 Matches 158; Conservative 66; Mismatches 131; Indels 10; Gaps 8;  
 QY 32 DLYQVSLSHKD-NIIFSPGLITLVLEWVQLGAKGKQQIROTLL--KQETSAGEFLV 88  
 Db 2 DLYKELAKESPKDKNIIFSPVSSALAMLSLGAKGSTATQILEVGFNLTETSEADIHOG 61  
 QY 89 LKSFCSAISEKKQETFFNLALYQEGFTVKEQYLHGNKEFFQSALIKLVDFOD-AKACA 147  
 Db 62 FCHLLHLNRPDKLQUNTANALFVDSKLSKLDLSFLEDKVLYGAEVQSVDFSDPAEAK 121  
 QY 148 EMISTWVERKTDGKIKOMFSEEGPLITLVLEWVQLGAKGKQQIROTLL--KQEE 79

Db 122 KQINDWYKKTQGIKIDLLS--DLDPDRLVLVNLAIYFKRWKTPDPENTREEDFYVDE 179  
 QY 208 GSTVKIPMKALLRTKYGFESSESLNVQVLELSYKGDSESLIILPAEGMDIEVEKLIIT 267  
 Db 180 TTTVKVPMSQTGRT-PRYGRDEELACQVLELPYKGA-SMLIILPDEG-GLETVEKALT 236  
 QY 268 AQILKWLSEMOBEEVEISLPKRVKQKVDPKDVLVSLNITIFSGGCDLSGITSSSEVY 327  
 Db 237 PETLKKWTKSLTKRSVELYLPKFLKLEISYDLKDVLEKLGITDLFSNKAADLSGISDKDLK 296  
 QY 328 VSOVTQKVFPEINEDGSEAAATSTGIHIPVIMSLAOSQFIANHPFFIMKHNFETESILFMG 387  
 Db 297 VSKVVHKAFLVNEEGTEAAATGV-IIVPSLPPPEFKANRPFLLIRNDPNTGSLIFMG 355  
 QY 388 RVINP 392  
 Db 356 KWNP 360

## RESULT 15

US-09-823-187-31  
 Sequence 31, Application US/09823187  
 Publication No. US2003009652A1  
 GENERAL INFORMATION:  
 APPLICANT: Burgess, Catherine  
 APPLICANT: Gusev, Vladimir Y  
 APPLICANT: Liu, Xiaohong  
 APPLICANT: Majumder, Kumud  
 APPLICANT: Padigaru, Muralidhar  
 APPLICANT: Patturajan, Meera  
 APPLICANT: Shimkets, Richard A  
 APPLICANT: Spaderna, Steven K  
 APPLICANT: Spytak, Kimberly  
 APPLICANT: Taupier, Raymond J  
 TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME  
 FILE REFERENCE: 15966-745  
 CURRENT APPLICATION NUMBER: US/09/823,187  
 CURRENT FILING DATE: 2001-03-29  
 PRIOR APPLICATION NUMBER: 60/193,339  
 PRIOR FILING DATE: 2000-03-30  
 PRIOR APPLICATION NUMBER: 60/193,205  
 PRIOR FILING DATE: 2000-03-30  
 PRIOR APPLICATION NUMBER: 60/195,343  
 PRIOR FILING DATE: 2000-04-05  
 PRIOR APPLICATION NUMBER: 60/195,088  
 PRIOR FILING DATE: 2000-04-06  
 PRIOR APPLICATION NUMBER: 60/195,005  
 PRIOR FILING DATE: 2000-04-06  
 PRIOR APPLICATION NUMBER: 60/195,792  
 PRIOR FILING DATE: 2000-04-10  
 PRIOR APPLICATION NUMBER: 60/196,556  
 PRIOR FILING DATE: 2000-04-11  
 PRIOR APPLICATION NUMBER: 60/197,081  
 PRIOR FILING DATE: 2000-04-13  
 PRIOR APPLICATION NUMBER: 60/197,525  
 PRIOR FILING DATE: 2000-04-14  
 PRIOR APPLICATION NUMBER: 60/197,087  
 PRIOR FILING DATE: 2000-04-14  
 NUMBER OF SEQ ID NOS: 103  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 31  
 LENGTH: 377  
 TYPE: PRT  
 ORGANISM: Homo sapiens  
 US-09-823-187-31

Query Match 34.2%; Score 679.5; DB 10; Length 377;  
 Best Local Similarity 39.7%; Pred. No. 9.6e-48;  
 Matches 150; Conservative 68; Mismatches 143; Indels 17; Gaps 6;  
 QY 23 AQKNTFPAVDLYQEVSLSHKD-NIIFSPGLITLVLEWVQLGAKGKQQIROTLL--KQEE 79

Db 9 ASANADFAFSLYKELVEQNPKNIFFSPVSISSALAMLSLGAKGNTATQILEVLGFNLTE 68  
QY 80 TSAGEEFLVLKFCSCSAISEKKOEFTFNLANALYLOEGFTVKEQYLHGNKEFFQSAIKLYD 139  
Db 69 TSEAEHQGFHLOTLNRPDTGLQTTGNALFVDKSLKLDDEFLEDSKRLYQSEVFSVD 128  
QY 140 FODAKACAEMISTWVERKTDGKIKDMFSGEEFGPLTRLVLVNAIYFKGDWKQKPKEDTQ 199  
Db 129 FSDPEAKQINDWEKKTQGIKDLL--KDLDSDTVLVVNYIYFKGKKKPPDPPELTE 186  
QY 200 LINFTKNGSTVKIPMMKALLRTKYGFSESSINQVLELSYKGDDEFSLIILPAEGMDI 259  
Db 187 EEDFHVDKTTVKVPMNQL--GTFYFRDEELNCKVLELPYKGNATSMFLPDPVGVKL 244  
QY 260 EEVEKLITAOQILKWLSEMQEVEVETSLPREKVEOKVDFKDVLYSLNITEIFSGGCDLSG 319  
Db 245 EQVEAALSPELTKRWLENMEPREVELYLPKFSIEGTYDLKDVLAKLGITDLFSNOADLSG 304  
QY 320 ITDSSEVYVSQVTKQVFFFEINEDGSEAAATSTGI-----HIPVIMSLAQOFTIANHPFLFI 374  
Db 305 ISEDEDLKYSKAVHKAVLEVDDEGTEAAAAATGAIIVPRSLPPLI-----EFTADRPFLFL 359  
QY 375 MKINPTESILFMGRVTNP 392  
Db 360 IYDNPTGSILFMGKVYNP 377

Search completed: October 21, 2004, 06:57:23  
Job time : 132 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: October 21, 2004, 06:38:56 ; Search time 40 Seconds  
(without alignments)  
649.916 Million cell updates/sec

Title: US-10-628-395-2  
Perfect score: 1987  
Sequence: 1 MDRIFLWSLLLPFGQASR.....FMKHNPTESILFMGRVTNP 392

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents AA:\*  
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6: /cgn2\_6/ptodata/1/iaa/backfiles1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1987	100.0	392	3	US-09-026-408-2
2	1987	100.0	392	4	US-09-902-684-2
3	1987	100.0	405	3	US-09-026-408-13
4	1987	100.0	405	4	US-09-902-684-13
5	1777.5	89.5	406	1	US-08-434-881-2
6	1777.5	89.5	406	3	US-08-977-771-2
7	1777.5	89.5	406	3	US-09-361-773-2
8	791.5	39.8	410	3	US-08-948-997-2
9	791.5	39.8	410	4	US-09-722-292-2
10	791.5	39.8	410	4	US-09-722-292-2
11	788.5	39.7	410	3	US-09-348-817A-3
12	788.5	39.7	410	4	US-09-722-292-3
13	756	38.0	407	3	US-08-948-997-3
14	751	37.8	407	1	US-08-487-823B-2
15	751	37.8	407	2	US-08-997-040-2
16	751	37.8	407	2	US-09-203-237-2
17	651.5	32.8	420	1	US-08-487-823B-4
18	651.5	32.8	420	2	US-08-997-040-4
19	651.5	32.8	420	2	US-09-203-237-4
20	649	32.7	390	1	US-08-568-147B-2
21	643	32.4	390	3	US-09-266-910-3
22	642.5	32.3	406	1	US-08-487-823B-5
23	642.5	32.3	406	2	US-08-997-040-5
24	642.5	32.3	406	2	US-09-203-237-5
25	641	32.3	390	3	US-09-266-910-4
26	595	29.9	376	3	US-09-200-965-2
27	591.5	29.8	425	4	US-10-024-427-2

28	573.5	28.9	379	1	US-08-121-714-4	Sequence 4, Appli
29	573.5	28.9	379	1	US-08-477-108A-4	Sequence 4, Appli
30	573.5	28.9	379	2	US-08-477-112-4	Sequence 4, Appli
31	573.5	28.9	379	5	PCT-US93-08322-4	Sequence 4, Appli
32	569.5	28.7	375	1	US-08-121-714-8	Sequence 8, Appli
33	569.5	28.7	375	1	US-08-477-108A-8	Sequence 8, Appli
34	569.5	28.7	375	2	US-08-477-112-8	Sequence 8, Appli
35	569.5	28.7	375	5	PCT-US93-08322-8	Sequence 8, Appli
36	562.5	28.3	397	3	US-08-948-997-5	Sequence 5, Appli
37	562.5	28.3	397	3	US-09-348-817A-5	Sequence 5, Appli
38	562.5	28.3	397	4	US-09-722-292-5	Sequence 5, Appli
39	562.5	28.3	397	6	5457090-2	Patent No. 5457090
40	562.5	28.3	397	6	5457090-4	Patent No. 5457090
41	561.5	28.3	397	6	5457090-9	Patent No. 5457090
42	558.5	28.1	402	3	US-08-948-997-4	Sequence 4, Appli
43	558	28.1	402	3	US-09-348-817A-4	Sequence 4, Appli
44	558	28.1	402	4	US-09-722-292-4	Sequence 4, Appli
45	558	28.1	402	4	US-09-722-292-4	Sequence 4, Appli

ALIGNMENTS

RESULT 1  
US-09-026-408-2  
; Sequence 2, Application US/09026408  
; Patent No. 6303338  
; GENERAL INFORMATION:  
; APPLICANT: NI et al.  
; TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
; TITLE OF INVENTION: INHIBITOR  
; NUMBER OF SEQUENCES: 15  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
; STREET: 1100 NEW YORK AVENUE, SUITE 600  
; CITY: WASHINGTON  
; STATE: DC  
; COUNTRY: USA  
; ZIP: 20005-3934  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patentin Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/026,408  
; FILING DATE: Herewith  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 08/934,011  
; FILING DATE: 15-AUG-1997  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US 60/024,056  
; FILING DATE: 16-AUG-1996  
; ATTORNEY/AGENT INFORMATION:  
; NAME: STEFFE, ERIC K.  
; REGISTRATION NUMBER: 36,688  
; REFERENCE/DOCKET NUMBER: 1488.0300002  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 202-371-2600  
; TELEFAX: 202-371-2540  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 392 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-09-026-408-2

Query Match 100.0%; Score 1987; DB 3; Length 392;  
Best Local Similarity 100.0%; Pred. No. 1.1e-187;  
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;



QY 1 MDTIFWLSLLLFQSQASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMVQ 60  
 Db 1 MDTIFWLSLLLFQSQASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMVQ 60  
 QY 61 LGAKGAKQQIROTILKQOETAGBEFLVLSFCSAISSEKQOFTFNLANALYQEGFTVK 120  
 Db 61 LGAKGAKQQIROTILKQOETAGBEFLVLSFCSAISSEKQOFTFNLANALYQEGFTVK 120  
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 Db 121 BOYLHGNKEFFQSAIKLVDFODAKACAEMI STWVERKTDGKIDMFSGEEFGPLTRVLV 180  
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 Db 181 NAIYFKGDMKQKFRKEDTQILNFTKNGSTVKIPMKALLRTKYGYFSESSLYQVLELS 240  
 QY 241 YKGDEFSLIIILPAEGMDIEVEKLIITAQQLKWLSEMQEVEEISLPRFKVEQKVDKFD 300  
 Db 241 YKGDEFSLIIILPAEGMDIEVEKLIITAQQLKWLSEMQEVEEISLPRFKVEQKVDKFD 300  
 QY 301 VLYSLNTEIFSGGCDLSGITDSSEVYVSQTKVFFFEINEDGSEATSTGIHIPVIMSL 360  
 Db 301 VLYSLNTEIFSGGCDLSGITDSSEVYVSQTKVFFFEINEDGSEATSTGIHIPVIMSL 360  
 QY 361 AQSOFIANHPFLFMKNPTESILFMGRVTNP 392  
 Db 361 AQSOFIANHPFLFMKNPTESILFMGRVTNP 392

RESULT 2

US-09-902-684-2  
 ; Sequence 2, Application US/09902684  
 ; Patent No. 6649738  
 ; GENERAL INFORMATION:  
 ; APPLICANT: NI et al.  
 ; TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
 ; INHIBITOR  
 ; NUMBER OF SEQUENCES: 15  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
 ; STREET: 1100 NEW YORK AVENUE, SUITE 600  
 ; CITY: WASHINGTON  
 ; STATE: DC  
 ; COUNTRY: USA  
 ; ZIP: 20005-3934  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/09/902,684  
 ; FILING DATE: 12-Jul-2001  
 ; CLASSIFICATION: <Unknown>  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 09/026,408  
 ; FILING DATE: <Unknown>  
 ; APPLICATION NUMBER: US 60/024,056  
 ; FILING DATE: 16-AUG-1996  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: STEFFE, ERIC K.  
 ; REGISTRATION NUMBER: 36,688  
 ; REFERENCE/DOCKET NUMBER: 1488.0300002  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 202-371-2600  
 ; TELEFAX: 202-371-2540  
 ; INFORMATION FOR SEQ ID NO: 2:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 392 amino acids  
 ; TYPE: amino acid  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 2:

US-09-902-684-2

Query Match 100.0%; Score 1987; DB 4; Length 392;  
 Best Local Similarity 100.0%; Pred. No. 1.1e-187;  
 Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MDTIFWLSLLLFQSQASRCSAQKNTFAVDLYQEVSLSHKDNIIFSPGLITLVLEMVQ 60  
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 QY 61 LGAKGAKQQIROTILKQOETAGBEFLVLSFCSAISSEKQOFTFNLANALYQEGFTVK 120  
 Db 61 LGAKGAKQQIROTILKQOETAGBEFLVLSFCSAISSEKQOFTFNLANALYQEGFTVK 120  
 QY 121 BOYLHGNKEFFQSAIKLVDFODAKACAEMI STWVERKTDGKIDMFSGEEFGPLTRVLV 180  
 Db 121 BOYLHGNKEFFQSAIKLVDFODAKACAEMI STWVERKTDGKIDMFSGEEFGPLTRVLV 180  
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 Db 181 NAIYFKGDMKQKFRKEDTQILNFTKNGSTVKIPMKALLRTKYGYFSESSLYQVLELS 240  
 QY 241 YKGDEFSLIIILPAEGMDIEVEKLIITAQQLKWLSEMQEVEEISLPRFKVEQKVDKFD 300  
 Db 241 YKGDEFSLIIILPAEGMDIEVEKLIITAQQLKWLSEMQEVEEISLPRFKVEQKVDKFD 300  
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 Db 301 VLYSLNTEIFSGGCDLSGITDSSEVYVSQTKVFFFEINEDGSEATSTGIHIPVIMSL 360  
 QY 361 AQSOFIANHPFLFMKNPTESILFMGRVTNP 392  
 Db 361 AQSOFIANHPFLFMKNPTESILFMGRVTNP 392

RESULT 3

US-09-026-408-13  
 ; Sequence 13, Application US/09026408  
 ; Patent No. 6303338  
 ; GENERAL INFORMATION:  
 ; APPLICANT: NI et al.  
 ; TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR  
 ; INHIBITOR  
 ; NUMBER OF SEQUENCES: 15  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
 ; STREET: 1100 NEW YORK AVENUE, SUITE 600  
 ; CITY: WASHINGTON  
 ; STATE: DC  
 ; COUNTRY: USA  
 ; ZIP: 20005-3934  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/09/026,408  
 ; FILING DATE: Herewith  
 ; CLASSIFICATION:  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US 09/934,011  
 ; FILING DATE: 15-AUG-1997  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US 60/024,056  
 ; FILING DATE: 16-AUG-1996  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: STEFFE, ERIC K.  
 ; REGISTRATION NUMBER: 36,688  
 ; REFERENCE/DOCKET NUMBER: 1488.0300002  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 202-371-2600  
 ; TELEFAX: 202-371-2540

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; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 405 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-026-408-13

Query Match      100.0%; Score 1987; DB 3; Length 405;
Best Local Similarity 100.0%; Pred. No. 1.2e-187;
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFFSLGTTLVLEWVQ 60
DB 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFFSLGTTLVLEWVQ 60
QY 61 LGAKGAKQAOQIROTLLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYLQEGFTVK 120
DB 61 LGAKGAKQAOQIROTLLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYLQEGFTVK 120
QY 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGEEFGPLTRLVLV 180
DB 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGEEFGPLTRLVLV 180
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DB 181 NAIYFGDMKQKPKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLNYQVLELS 240
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DB 241 YKGDSEFLIILPAEGMDIEVEKLITAAQILKWLSEMOEVEISLPRFKEQKVDKFD 300
QY 301 VLYSLNITEIFSGGCDLSGTTDSSEVYVSQVTKVFFNEEDGSEAAATSTGHIPIVMSL 360
DB 301 VLYSLNITEIFSGGCDLSGTTDSSEVYVSQVTKVFFNEEDGSEAAATSTGHIPIVMSL 360
QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392
DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 4
US-09-902-684-13
; Sequence 13, Application US/09902684
; Patent No. 6649738
; GENERAL INFORMATION:
; APPLICANT: Ni et al.
; TITLE OF INVENTION: PANCREAS-DERIVED PLASMINOGEN ACTIVATOR INHIBITOR
; NUMBER OF SEQUENCES: 15
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005-3934
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/902,684
; FILING DATE: 12-Jul-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/026,408
; FILING DATE: <Unknown>
; APPLICATION NUMBER: US 60/024,056
; FILING DATE: 16-AUG-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: STEFEE, ERIC K.

; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 405 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-026-408-13

Query Match      100.0%; Score 1987; DB 4; Length 405;
Best Local Similarity 100.0%; Pred. No. 1.2e-187;
Matches 392; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFFSLGTTLVLEWVQ 60
DB 1 MDTIFLWSLLLLPFGSQARCSAQKNTFAVDLYQEVSLSHKDNIIFFSLGTTLVLEWVQ 60
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DB 61 LGAKGAKQAOQIROTLLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYLQEGFTVK 120
QY 121 EQYLHGNKEFFQSAIKLVDFQDAKACAEMISTWVERKTDGKIKDMFSGEEFGPLTRLVLV 180
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DB 241 YKGDSEFLIILPAEGMDIEVEKLITAAQILKWLSEMOEVEISLPRFKEQKVDKFD 300
QY 301 VLYSLNITEIFSGGCDLSGTTDSSEVYVSQVTKVFFNEEDGSEAAATSTGHIPIVMSL 360
DB 301 VLYSLNITEIFSGGCDLSGTTDSSEVYVSQVTKVFFNEEDGSEAAATSTGHIPIVMSL 360
QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392
DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 5
US-08-434-881-2
; Sequence 2, Application US/08434881
; Patent No. 5804376
; GENERAL INFORMATION:
; APPLICANT: Braxton, Scott M.
; APPLICANT: Wilde, Craig G.
; APPLICANT: Diep, Dinh
; TITLE OF INVENTION: Pancreas-Derived Serpin
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3330 Hillview Avenue
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/434,881
; FILING DATE: Herewith
; CLASSIFICATION: 435
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; ATTORNEY/AGENT INFORMATION:
; NAME: Luther, Barbara J.
; REGISTRATION NUMBER: 33954
; REFERENCE/DOCKET NUMBER: PF0035 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-852-0195
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 406 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-434-881-2

Query Match      89.5%; Score 1777.5; DB 1; Length 406;
Best Local Similarity 90.4%; Pred. No. 5.9e-167;
Matches 358; Conservative 7; Mismatches 24; Indels 7; Gaps 2;

QY 1 MDTIFLMSLLLLFFGSAQSCSAQKNTFAVDLYQEVSLSHKDNIIIFSPGLITLVLEMVQ 60
DB 1 MDTIFXWSLLLLFFXGSAQSCSAQKNTFVGVDLYQEVSLSHKDNIIIFXPLGIXLXEMXQ 60
QY 61 LGAKGKAQQQIRQTLKQETSAGEEFLVLKSPCSAISEKQKQETFNLANALYL----QEG 116
DB 61 LGAKGKAQQQXXRQTLQOQXSAGEEFLCXEVIFSLPSQRKXK--NLHLILPMPSTXQEG 117
QY 117 FTVKEQYVHGKKEFFQSAIKLVDFQDAKACAEIMSTWVERKTDGKIKDMFSGEEFGPLTR 176
DB 118 FTVKEQYVHGKKEFFQSAIKLVDFQDAKACAGIMSTWVERKTDGKIKDMFSGEEFGPLTR 177
QY 177 LVLNVAIFYGDKWKQKPRKEDTOLINFTKNGSTVKIPMKKALLRTKYGYFSESSLYNQV 236
DB 178 LVLNVAIFYGDKWKQKPRKEDTOLINFTKNGSTVKIPMKKALLRTKYGYFSESSLYNQV 237
QY 237 LELSYKGDSESLIILPAEGMDIEVEKLIQAQILKWLSEMOEVEEISLPRFKVEQKV 296
DB 238 LELSYKGDSESLIILPAEGMDIEVEKLIQAQILKWLSEMOEVEEISLPRFKVEQKV 297
QY 297 DFKDVLVSLNITEIFSGGCDLSGITDSSEVYVSQVTKVFFFEINEDGSEAAATSTGIHIPV 356
DB 298 DFKDVLVSLNITEIFSGGCDLSGITDSSEVYVSQVTKVFFFEINEDGSEAAATSTGIHIPV 357
QY 357 IMSLAQSOFTANHPFLFMKHNPTESILFMGRVTNP 392
DB 358 IMSLAQSOFTANHPFLFMKHNPTESILFMGRVTNP 393

RESULT 6
US-08-977-771-2
; Sequence 2, Application US/0897771
; Patent No. 601346
; GENERAL INFORMATION:
; APPLICANT: Braxton, Scott M.
; APPLICANT: Wilde, Craig G.
; APPLICANT: Diep, Dinh
; TITLE OF INVENTION: Pancreas-Derived Serpin
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3330 Hillview Avenue
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/977,771
; FILING DATE:

```

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; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/ 434,881
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Luther, Barbara J.
; REGISTRATION NUMBER: 33954
; REFERENCE/DOCKET NUMBER: PF0035 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-852-0195
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 406 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-977-771-2

Query Match      89.5%; Score 1777.5; DB 3; Length 406;
Best Local Similarity 90.4%; Pred. No. 5.9e-167;
Matches 358; Conservative 7; Mismatches 24; Indels 7; Gaps 2;

QY 1 MDTIFLMSLLLLFFGSAQSCSAQKNTFAVDLYQEVSLSHKDNIIIFSPGLITLVLEMVQ 60
DB 1 MDTIFXWSLLLLFFXGSAQSCSAQKNTFVGVDLYQEVSLSHKDNIIIFXPLGIXLXEMXQ 60
QY 61 LGAKGKAQQQIRQTLKQETSAGEEFLVLKSPCSAISEKQKQETFNLANALYL----QEG 116
DB 61 LGAKGKAQQQXXRQTLQOQXSAGEEFLCXEVIFSLPSQRKXK--NLHLILPMPSTXQEG 117
QY 117 FTVKEQYVHGKKEFFQSAIKLVDFQDAKACAEIMSTWVERKTDGKIKDMFSGEEFGPLTR 176
DB 118 FTVKEQYVHGKKEFFQSAIKLVDFQDAKACAGIMSTWVERKTDGKIKDMFSGEEFGPLTR 177
QY 177 LVLNVAIFYGDKWKQKPRKEDTOLINFTKNGSTVKIPMKKALLRTKYGYFSESSLYNQV 236
DB 178 LVLNVAIFYGDKWKQKPRKEDTOLINFTKNGSTVKIPMKKALLRTKYGYFSESSLYNQV 237
QY 237 LELSYKGDSESLIILPAEGMDIEVEKLIQAQILKWLSEMOEVEEISLPRFKVEQKV 296
DB 238 LELSYKGDSESLIILPAEGMDIEVEKLIQAQILKWLSEMOEVEEISLPRFKVEQKV 297
QY 297 DFKDVLVSLNITEIFSGGCDLSGITDSSEVYVSQVTKVFFFEINEDGSEAAATSTGIHIPV 356
DB 298 DFKDVLVSLNITEIFSGGCDLSGITDSSEVYVSQVTKVFFFEINEDGSEAAATSTGIHIPV 357
QY 357 IMSLAQSOFTANHPFLFMKHNPTESILFMGRVTNP 392
DB 358 IMSLAQSOFTANHPFLFMKHNPTESILFMGRVTNP 393

RESULT 7
US-09-361-773-2
; Sequence 2, Application US/09361773
; Patent No. 6197519
; GENERAL INFORMATION:
; APPLICANT: Braxton, Scott M.
; APPLICANT: Wilde, Craig G.
; APPLICANT: Diep, Dinh
; TITLE OF INVENTION: Pancreas-Derived Serpin
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3330 Hillview Avenue
; CITY: Palo Alto
; STATE: California
; COUNTRY: USA
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/977,771
; FILING DATE:

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SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/361,773  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/977,771  
FILING DATE:  
APPLICATION NUMBER: 08/434,881  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Luther, Barbara J.  
REGISTRATION NUMBER: 33954  
REFERENCE/DOCKET NUMBER: PF0035 US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 415-855-0555  
TELEFAX: 415-852-0195  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 406 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-361-773-2

Query Match 89.5%; Score 1777.5; DB 3; Length 406;

Best Local Similarity 90.4%; Pred. No. 5.9e-167;  
Matches 358; Conservative 7; Mismatches 24; Indels 7; Gaps 2;

QY 1 MDIFWLSLLLPFGSOASCSAQKNTFAVDLYQEVSLSHKDNIIFFPLGTLVLEMQ 60  
DB 1 MDIFWLSLLLPFGSOASCSAQKNTFAVDLYQEVSLSHKDNIIFFPLGTLVLEMQ 60  
QY 61 LGAKGAQAOIRQLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYL---QBG 116  
DB 61 LGAKGAQAOIRQLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYL---QBG 116  
QY 117 FTVEQVYLNKQEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTR 176  
DB 117 FTVEQVYLNKQEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTR 176  
QY 118 FTVEQVYLNKQEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTR 177  
DB 118 FTVEQVYLNKQEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTR 177  
QY 177 LVLVNAIFYKGDWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLNYQV 236  
DB 177 LVLVNAIFYKGDWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLNYQV 236  
QY 237 LELSYKGDSEFLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEISLPRFKVEQV 296  
DB 237 LELSYKGDSEFLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEISLPRFKVEQV 296  
QY 297 DFKDVLVSLNITIFSGGCDLSGITDSSEVYVSQVTKVFFPEINEDGSEAAATSTGIHIPV 356  
DB 297 DFKDVLVSLNITIFSGGCDLSGITDSSEVYVSQVTKVFFPEINEDGSEAAATSTGIHIPV 356  
QY 357 IMSLAQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
DB 357 IMSLAQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 8  
US-09-361-773-2  
Sequence 2, Application US/08949997  
Patent No. 6008020  
GENERAL INFORMATION:  
APPLICANT: HASTINGS, GREGG  
APPLICANT: COLEMAN, TIM  
APPLICANT: LAWRENCE, DANIEL  
TITLE OF INVENTION: BRAIN-ASSOCIATED INHIBITOR OF  
NUMBER OF SEQUENCES: 17  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HUMAN GENOME SCIENCES, INC.  
STREET: 9410 KEY WEST AVENUE  
CITY: ROCKVILLE

STATE: MD  
COUNTRY: USA  
ZIP: 20850  
COMPUTER: IBM PC compatible  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/948,997  
FILING DATE: Oct-10-97  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: A. ANDERS BROOKES  
REGISTRATION NUMBER: 36,373  
REFERENCE/DOCKET NUMBER: PF336  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (301) 309-8504  
TELEFAX: (301) 309-8512  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 410 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-948-997-2

Query Match 39.8%; Score 791.5; DB 3; Length 410;

Best Local Similarity 39.5%; Pred. No. 1.4e-69;  
Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;

QY 6 LWSLLLPFGSOASCSAQKNTFAVDLYQEVSLSHKDNIIFFPLGTLVLEMQ 64  
DB 6 LWSLLLPFGSOASCSAQKNTFAVDLYQEVSLSHKDNIIFFPLGTLVLEMQ 64  
QY 65 GKAAQAOIRQLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYLQEGFTVBOYL 124  
DB 65 GKAAQAOIRQLKQETSAGEEFLVLKSFCSAISEKKQEFFTNLANALYLQEGFTVBOYL 124  
QY 66 GSTQKIRSHSGVDSLKNGEFLKPSNMVTKAESQYVNMKIANSLFVQNGFHVNEEF 125  
DB 66 GSTQKIRSHSGVDSLKNGEFLKPSNMVTKAESQYVNMKIANSLFVQNGFHVNEEF 125  
QY 125 HGNKEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTRVNAV 184  
DB 125 HGNKEFFSOAIIKLVDFQAKAEMISTWVERKTDGKIKDMFSGEERGLTRVNAV 184  
QY 126 QMKKYFNAAYNVHDFSONAVANYINKWENNINLVKDLVSPRDFDAATYALINAVY 185  
DB 126 QMKKYFNAAYNVHDFSONAVANYINKWENNINLVKDLVSPRDFDAATYALINAVY 185  
QY 185 PKGDKWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLN---YQVLELS 240  
DB 185 PKGDKWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLN---YQVLELS 240  
QY 186 PKGDKWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLN---YQVLELS 245  
DB 186 PKGDKWKQFRKEDTQLINFTKNGSTVKIPMKALLRTKYGYSSESLN---YQVLELS 245  
QY 241 YKGEFSLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEISLPRFKVEQV 300  
DB 241 YKGEFSLIILPAEGMDIEVEKLITAOQILKWLSEMOEVEISLPRFKVEQV 300  
QY 245 YEGDEISMLVLSRQEVPLATLEPLVKAQVEEWSVYKQKVEYLPFRFTVEQEI 305  
DB 245 YEGDEISMLVLSRQEVPLATLEPLVKAQVEEWSVYKQKVEYLPFRFTVEQEI 305  
QY 301 VLYSLNITIFSGGCDLSGITDSSEVYVSQVTKVFFPEINEDGSEAAATSTGIHIPV 360  
DB 301 VLYSLNITIFSGGCDLSGITDSSEVYVSQVTKVFFPEINEDGSEAAATSTGIHIPV 360  
QY 306 VLKALGITEIFIKANUTGLSKNEIFLSKAIHKSFLVNEEGSEAAVSGMIAISRNAV 365  
DB 306 VLKALGITEIFIKANUTGLSKNEIFLSKAIHKSFLVNEEGSEAAVSGMIAISRNAV 365  
QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
DB 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392

RESULT 9  
US-09-348-817A-2  
Sequence 2, Application US/09348817A  
Patent No. 6191260  
GENERAL INFORMATION:  
APPLICANT: Hastings et al.  
APPLICANT: COLEMAN, TIM  
TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen  
NUMBER OF SEQUENCES: 17  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HUMAN GENOME SCIENCES, INC.  
STREET: 9410 KEY WEST AVENUE  
CITY: ROCKVILLE

; PRIOR APPLICATION NUMBER: 60/028,117  
 ; PRIOR FILING DATE: 1996-10-11  
 ; NUMBER OF SEQ ID NOS: 17  
 ; SOFTWARE: PatentIn Ver. 2.1  
 ; SEQ ID NO 2  
 ; LENGTH: 410  
 ; TYPE: PRP  
 ; ORGANISM: Homo sapiens  
 ; FEATURE:  
 ; NAME/KEY: Propep  
 ; LOCATION: (1)..(410)  
 ; NAME/KEY: signal  
 ; LOCATION: (1)..(18)  
 ; NAME/KEY: chain  
 ; LOCATION: (19)..(410)  
 ; US-09-348-817A-2  
  
 Query Match 39.8%; Score 791.5; DB 3; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 1.4e-69;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
  
 QY 6 LWSLLLLFFGSCASRCSAQNTEFAVDLYOEVSLSHKD-NIIFSPGLGITLVLEWVQLGAK 64  
 Db 6 LFSLLVLSQMATGATFPPEAIALDLSVNNYRLRATGEDENILFSPSLIALAMGMELGAQ 65  
 QY 65 GKAAQQIROTLLKQOETSAGBEEFLVLSFCSAISSEKQOETFNLANALYLQEGFTVKEQYL 124  
 Db 66 GSTQKEIRHSMGYDSLKNGEFLKEFSNNVTAKESQYVMKIANSLFVQNGFHVNEEFL 125  
 QY 125 HGNKEFFQSAIKLVDFODAKACAEWISTWVERKTDGKIDMFSGEERFGLTRLVLVNAIY 184  
 Db 126 QMKKXFNAAVNHVDFSONVAVANYINKWVNNNTNLLVKDLVSPRDFDAATYALINAVY 185  
 QY 185 FKGDWKOKFRKEDTQLINFTKNGSTVKIPMMKALLRTKYGFSESSLN- ---YOVLELS 240  
 Db 186 FKNWKSQFRPENTRTFTSKDDSEVOIPMWYQOGEFFYGFSDGNSAGGIYQVLEIP 245  
 QY 241 YKGEFSLIILPAEGMDIEBEVKLITAOQILKWLSEMOBEEVEISLPFRKQKVDKFD 300  
 Db 246 YEGDEISMLVLSRQEVPLATLPLVKAQLVEEWSANVKQKVEVYLPRTVEQIDKLD 305  
 QY 301 VLYSLNITEIFSGCDLSGITDSEVYVSVQVTKVFEINEDGSEATSTGHIPIVMSL 360  
 Db 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIAISRMV 365  
 QY 361 AQSFANHPFLFMKHNPTESILFMGRVTNP 392  
 Db 366 LYPQVVDHPPFFLIRNRRGTILFMGRVHP 397

RESULT 10  
 US-09-722-292-2  
 ; Sequence 2, Application US/09722292  
 ; Patent No. 6541452  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hastings et al.  
 ; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen  
 ; FILE REFERENCE: PF336D1  
 ; CURRENT FILING DATE: 2000-11-28  
 ; PRIOR APPLICATION NUMBER: 09/348,817  
 ; PRIOR FILING DATE: 1999-07-08  
 ; PRIOR APPLICATION NUMBER: 60/028,117  
 ; PRIOR FILING DATE: 1996-10-11  
 ; NUMBER OF SEQ ID NOS: 17  
 ; SOFTWARE: PatentIn Ver. 2.1  
 ; SEQ ID NO 2  
 ; LENGTH: 410  
 ; TYPE: PRP  
 ; ORGANISM: Homo sapiens  
 ; FEATURE:  
 ; NAME/KEY: Propep

; LOCATION: (1)..(410)  
 ; NAME/KEY: signal  
 ; LOCATION: (1)..(18)  
 ; NAME/KEY: chain  
 ; LOCATION: (19)..(410)  
 ; US-09-722-292-2  
  
 Query Match 39.8%; Score 791.5; DB 4; Length 410;  
 Best Local Similarity 39.5%; Pred. No. 1.4e-69;  
 Matches 155; Conservative 97; Mismatches 135; Indels 5; Gaps 2;  
  
 QY 6 LWSLLLLFFGSCASRCSAQNTEFAVDLYOEVSLSHKD-NIIFSPGLGITLVLEWVQLGAK 64  
 Db 6 LFSLLVLSQMATGATFPPEAIALDLSVNNYRLRATGEDENILFSPSLIALAMGMELGAQ 65  
 QY 65 GKAAQQIROTLLKQOETSAGBEEFLVLSFCSAISSEKQOETFNLANALYLQEGFTVKEQYL 124  
 Db 66 GSTQKEIRHSMGYDSLKNGEFLKEFSNNVTAKESQYVMKIANSLFVQNGFHVNEEFL 125  
 QY 125 HGNKEFFQSAIKLVDFODAKACAEWISTWVERKTDGKIDMFSGEERFGLTRLVLVNAIY 184  
 Db 126 QMKKXFNAAVNHVDFSONVAVANYINKWVNNNTNLLVKDLVSPRDFDAATYALINAVY 185  
 QY 185 FKGDWKOKFRKEDTQLINFTKNGSTVKIPMMKALLRTKYGFSESSLN- ---YOVLELS 240  
 Db 186 FKNWKSQFRPENTRTFTSKDDSEVOIPMWYQOGEFFYGFSDGNSAGGIYQVLEIP 245  
 QY 241 YKGEFSLIILPAEGMDIEBEVKLITAOQILKWLSEMOBEEVEISLPFRKQKVDKFD 300  
 Db 246 YEGDEISMLVLSRQEVPLATLPLVKAQLVEEWSANVKQKVEVYLPRTVEQIDKLD 305  
 QY 301 VLYSLNITEIFSGCDLSGITDSEVYVSVQVTKVFEINEDGSEATSTGHIPIVMSL 360  
 Db 306 VLKALGITEIFIKDANLTGLSDNKEIFLSKAHKSFLVNEEGSEAAVSGMIAISRMV 365  
 QY 361 AQSFANHPFLFMKHNPTESILFMGRVTNP 392  
 Db 366 LYPQVVDHPPFFLIRNRRGTILFMGRVHP 397

RESULT 11  
 US-09-348-817A-3  
 ; Sequence 3, Application US/09348817A  
 ; Patent No. 6191260  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Hastings et al.  
 ; TITLE OF INVENTION: Brain-Associated Inhibitor of Tissue-Type Plasminogen  
 ; FILE REFERENCE: PF336D1  
 ; CURRENT FILING DATE: 1999-07-08  
 ; PRIOR APPLICATION NUMBER: 08/948,997  
 ; PRIOR FILING DATE: 1997-10-10  
 ; PRIOR APPLICATION NUMBER: 60/028,117  
 ; PRIOR FILING DATE: 1996-10-11  
 ; NUMBER OF SEQ ID NOS: 17  
 ; SOFTWARE: PatentIn Ver. 2.1  
 ; SEQ ID NO 3  
 ; LENGTH: 410  
 ; TYPE: PRP  
 ; ORGANISM: Gallus gallus  
 ; US-09-348-817A-3

Query Match 39.7%; Score 788.5; DB 3; Length 410;  
 Best Local Similarity 40.0%; Pred. No. 2.8e-69;  
 Matches 158; Conservative 92; Mismatches 138; Indels 7; Gaps 3;  
  
 QY 5 FLWSLLLLFFGSCASRCSAQNTEFAVDLYOEVSLSHKD-NIIFSPGLGITLVLEWVQ 61  
 Db 3 FLGLLSLLVLSQMATGATFPPEAIALDLSVNNYRLRATGEDENILFSPSLIALAMGMEL 62  
 QY 62 GAKGKAAQQIROTLLKQOETSAGBEEFLVLSFCSAISSEKQOETFNLANALYLQEGFTVKE 121

Db 63 GAHGTTLKEIRHSLGDFSLKNGEFTFLKDLSDMATTEBESHVYLVNANSYLVQNGPHVSE 122  
Qy 122 QYHGNKEFPQSAIKLVDPQADAKACAMISTWERTDCKIKOMPSGEEFGPLTSLVLVN 181  
Db 123 KFLQLVKYKFAEVENIDFSQSAVATHINKVNHNTNMKIDFVSSRDFSALTHVLIN 182  
Qy 182 AIYFKGDMQKFRKEDTQINFTKNGSTVKIPMMKALLRTKYGVFSESSLN---YQVL 237  
Db 183 AIYFKGNKWSQFPEPTRIFSFTKDDTEVOIPMMYQOGFYYGFSFGSNEAGGIYQVL 242  
Qy 238 ELSYKGDSEFSLIILPAEGMDIEVEKLITAOQILKWLSEMOBEEVEISLPRFKVEQKVD 297  
Db 243 EIPYEGDEISMVLSRQEVPLVTLPLKASLINEWANSVKQKVEVYLPRTVEQEI 302  
Qy 298 FKDVLYSLNITEIFSGCDLSGIDTSSEVVSQVTKQVFEINEDGSEATSTGHIHPVI 357  
Db 303 LKDVLLKGLGITEVFSRSDLTAMSDNKELYLAKAFKALEVNEEGSEAAASGMIATSR 362  
Qy 358 MSLAQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
Db 363 MAVLYPQVIVDHPFFFLVRNRRTGTFLFGRVNMHP 397

## RESULT 12

US-09-722-292-3  
; Sequence 3, Application US/09722292  
; Patent No. 6541452  
; GENERAL INFORMATION:  
; APPLICANT: Hastings et al.  
; TITLE OF INVENTION: Brain-associated Inhibitor of Tissue-Type Plasminogen  
; TITLE OF INVENTION: Activator  
; FILE REFERENCES: PF336D1  
; CURRENT APPLICATION NUMBER: US/09/722,292  
; CURRENT FILING DATE: 2000-11-28  
; PRIOR APPLICATION NUMBER: 09/348,817  
; PRIOR FILING DATE: 1999-07-08  
; PRIOR APPLICATION NUMBER: 60/028,117  
; PRIOR FILING DATE: 1996-10-11  
; NUMBER OF SEQ ID NOS: 17  
; SOFTWARE: Patent In Ver. 2.1  
; SEQ ID NO 3  
; TYPE: PRT  
; ORGANISM: Gallus gallus  
US-09-722-292-3

Query Match 39.7%; Score 788.5; DB 4; Length 410;  
Best Local Similarity 40.0%; Pred. No. 2.8e-69;  
Matches 158; Conservative 92; Mismatches 138; Indels 7; Gaps 3;

Qy 5 FLWSLLLLFPFGSQARCSAQKNT--EPADVLYQEVSLSHKD-NLIIFSLGITLVLEWVQL 61  
Db 3 FLGLSLLLVLPFSKAFKTNFPDETIAELSNVYNQLRAAREDENILFCPLSIAMGMIEL 62  
Qy 62 GAKGAQOQROTUKQOETSAGEEFLVKGFCSAISSEKQEFNLANALYLOEGFTVKE 121  
Db 63 GAHGTTLKEIRHSLGDFSLKNGEFTFLKDLSDMATTEBESHVYLVNANSYLVQNGPHVSE 122  
Qy 122 QYHGNKEFPQSAIKLVDPQADAKACAMISTWERTDCKIKOMFSGEEFGPLTRVLVN 181  
Db 123 KFLQLVKYKFAEVENIDFSQSAVATHINKVNHNTNMKIDFVSSRDFSALTHVLIN 182  
Qy 182 AIYFKGDMQKFRKEDTQINFTKNGSTVKIPMMKALLRTKYGVFSESSLN---YQVL 237  
Db 183 AIYFKGNKWSQFPEPTRIFSFTKDDTEVOIPMMYQOGFYYGFSFGSNEAGGIYQVL 242  
Qy 238 ELSYKGDSEFSLIILPAEGMDIEVEKLITAOQILKWLSEMOBEEVEISLPRFKVEQKVD 297  
Db 243 EIPYEGDEISMVLSRQEVPLVTLPLKASLINEWANSVKQKVEVYLPRTVEQEI 302  
Qy 298 FKDVLYSLNITEIFSGCDLSGIDTSSEVVSQVTKQVFEINEDGSEATSTGHIHPVI 357  
Db 303 LKDVLLKGLGITEVFSRSDLTAMSDNKELYLAKAFKALEVNEEGSEAAASGMIATSR 362

Qy 358 MSLAQSQFIANHPFLFMKHNPTESILFMGRVTNP 392  
Db 363 MAVLYPQVIVDHPFFFLVRNRRTGTFLFGRVNMHP 397  
RESULT 13  
US-08-948-997-3  
; Sequence 3, Application US/08948997  
; Patent No. 6008020  
; GENERAL INFORMATION:  
; APPLICANT: HASTINGS, GREGG  
; APPLICANT: COLEMAN, TIM  
; APPLICANT: LAWRENCE, DANIEL  
; TITLE OF INVENTION: BRAIN-ASSOCIATED INHIBITOR OF  
; TITLE OF INVENTION: TISSUE-TYPE PLASMINOGEN ACTIVATOR  
; NUMBER OF SEQUENCES: 17  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: HUMAN GENOME SCIENCES, INC.  
; STREET: 9410 KEY WEST AVENUE  
; CITY: ROCKVILLE  
; STATE: MD  
; COUNTRY: USA  
; ZIP: 20850  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/948,997  
; FILING DATE: Oct-10-97  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: A. ANDERS BROOKES  
; REGISTRATION NUMBER: 36,373  
; REFERENCE/DOCKET NUMBER: PF336  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (301) 309-8504  
; TELEFAX: (301) 309-8512  
; INFORMATION FOR SEQ ID NO: 3:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 407 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-948-997-3

Query Match 38.0%; Score 756; DB 3; Length 407;  
Best Local Similarity 39.2%; Pred. No. 4.4e-66;  
Matches 154; Conservative 90; Mismatches 143; Indels 6; Gaps 3;

Qy 5 FLWSLLLLFPFGSQARCSAQKNTFAV-DLYQEVSLSHKDNIIIFSLGITLVLEWVQLGA 63  
Db 3 FLGLSLLLVLPFSKAFKTNFPDETIAELSNVYNQLRAAREDENILFCPLSIAMGMIELGA 62  
Qy 64 GAKGAQOQROTUKQOETSAGEEFLVKGFCSAISSEKQEFNLANALYLOEGFTVKEQY 123  
Db 63 HGTTLKEIRHSLGDFSLKNGEFTFLKDLSDMATTEBESHVYLVNANSYLVQNGPHVSEKF 122  
Qy 124 LHGNKEFPQSAIKLVDPQADAKACAMISTWERTDCKIKOMFSGEEFGPLTRVLVNAI 183  
Db 123 LQLVKYKFAEVENIDFSQSAVATHINKVNHNTNMKIDFVSSRDFSALTH-VLIINAI 181  
Qy 184 YPKGDMQKFRKEDTQINFTKNGSTVKIPMMKALLRTKYGVFSESSLN---YQVLEL 239  
Db 182 YPKGNKWSQFPEPTRIFSFTKDDTEVOIPMMYQOGFYYGFSFGSNEAGGIYQVLEI 241  
Qy 240 SYKGDSEFSLIILPAEGMDIEVEKLITAOQILKWLSEMOBEEVEISLPRFKVEQKVDPK 299  
Db 242 PYEGDEISMVLSRQEVPLVTLPLKASLINEWANSVKQKVEVYLPRTVEQEI 301

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QY 300 DVLVSLNITELFGSGCDLSGITDSSEVYVQVTKVFFNEEDGSEATSTGIHIPVIMS 359
DB 302 DVLKGLGTEVFESRSDATMSDNKELYLAKAFKALEVNEEGSEAAASGMIAISRM 361
QY 360 LAQSQFIANHPFLFMKHNPTESILFMGRVTNP 392
DB 362 VLYPQVIVDHPFFFLVRNRTGTFLFMGRVMP 394

RESULT 14
US-08-487-823B-2
; Sequence 2, Application US/08487823B
; Patent No. 5700924
; GENERAL INFORMATION:
; APPLICANT: Braxton, Scott M.
; APPLICANT: Diep, Dinh
; APPLICANT: Stuart, Susan G.
; TITLE OF INVENTION: NOVEL SERPIN DERIVED FROM HUMAN
; TITLE OF INVENTION: HYPOTHALAMUS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: US
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/487,823B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Luther, Barbara J.
; REGISTRATION NUMBER: 33,954
; REFERENCE/DOCKET NUMBER: PF-0039 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-852-0195
; TELEX:
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 407 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-487-823B-2

Query Match 37.8%; Score 751; DB 1; Length 407;
Best Local Similarity 38.8%; Pred. No. 1.4e-65;
Matches 152; Conservative 95; Mismatches 137; Indels 8; Gaps 5;

QY 6 LWSLLLLFFGQSARCSAQNTEFAVDLYQEVSLSHKD-NIIFSPLGITLVLEWVQLGAK 64
DB 6 LFSLLVLQSNATCATPPEBAIVDLNVNMYNRLRATGEDENILFSPISIALANGMELGAQ 65
QY 65 GKAAQQIQTQLKQOETSAGEEFLVLKSPCSAISEKQOETFFNLALYLOEGFTVKEQYL 124
DB 66 GSTQKEIRSMGVDSUKNGEESFLKEFNSNMVTKAESQYVMKIANSLFVQNGFHYNEFL 125
QY 125 HGNKEFFQSAIKLVDPQAKAEMISITWVERKTDGKIDMFSGEBFGPLRLVLVNAIY 184
DB 126 QMMKYFNAAVNHVDFSQNVAVNYINKWENNTNVLKDLVSPRDFXAATYALINAVY 185
QY 185 FKGDWQKFKEDTQTLNFTKNGSTVTKPMOKALLRTKYGFSESSLN----YQVLELS 240

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DB 186 FKGNNKSRPENTFTFSTXDDSEVOIPMYOQGEFYGFSDGSEAGGIYQVLEIP 245
QY 241 YKGDFEFSIIILPAEGMDIEVEKLIITAAQILKWLSEMQEVEEISLPFRKVKQKVDPKD 300
DB 246 YEGDEISNMLVLSRQEVPLATLEPLVKAQLVEEWANSVKKQKVEVILPRFTVEQEDLDK 305
QY 301 VLYSLNITEIFSGCDLSGITDSSEVYVQVTKVFFNEEDGSEATSTGIHIPVIMS 360
DB 306 VLKALGITEIFI-KIKFDSLSDNKEIFLSKAHKSFLFVNEEGSELSYS-GM-IQLVGGC 362
QY 361 AQSQFIANHPFLFMKHNPTESILFMGRVTNP 392
DB 363 LYPQVIVDHPFFFLVRNRTGTFLFMGRVMP 394

RESULT 15
US-08-997-040-2
; Sequence 2, Application US/08997040
; Patent No. 5929210
; GENERAL INFORMATION:
; APPLICANT: Braxton, Scott M.
; APPLICANT: Diep, Dinh
; APPLICANT: Stuart, Susan G.
; TITLE OF INVENTION: NOVEL SERPIN DERIVED FROM HUMAN
; TITLE OF INVENTION: HYPOTHALAMUS
; NUMBER OF SEQUENCES: 5
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Incyte Pharmaceuticals, Inc.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: US
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ Version 1.5
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/997,040
; FILING DATE:
; CLASSIFICATION: 536
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/487,823
; FILING DATE: 07-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Luther, Barbara J.
; REGISTRATION NUMBER: 33,954
; REFERENCE/DOCKET NUMBER: PF-0039 US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-855-0555
; TELEFAX: 415-852-0195
; TELEX:
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 407 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-997-040-2

Query Match 37.8%; Score 751; DB 2; Length 407;
Best Local Similarity 38.8%; Pred. No. 1.4e-65;
Matches 152; Conservative 95; Mismatches 137; Indels 8; Gaps 5;

QY 6 LWSLLLLFFGQSARCSAQNTEFAVDLYQEVSLSHKD-NIIFSPLGITLVLEWVQLGAK 64
DB 6 LFSLLVLQSNATCATPPEBAIVDLNVNMYNRLRATGEDENILFSPISIALANGMELGAQ 65
QY 65 GKAAQQIQTQLKQOETSAGEEFLVLKSPCSAISEKQOETFFNLALYLOEGFTVKEQYL 124

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Db      66  GSTQKEIRHSMGYDSLXNGEESFSLKEFSNMVTAKESQYVMKIANSLFVQNGFHVNEEF 125
Qy      125  HGKKEFFOSAIKLVDFOKAKACAEIMISTWVERKTDGKIKOMFSGEEFGPLTRLVLVNAIY 184
Db      126  QMKKYPNAAVNHVDFSONVAVANYINKVENVNTNKLVDLVSPRDXAATYALALINAVY 185
Qy      185  FKGDWKQKFRKEDTQOLINFTKNGSTVKIPMMKALLRTKYGYPSSSLN-----YQVLELS 240
Db      186  FKGNWKSQFRPENTRTFSFTKDDSEVQIPMMYQOGEFYGFSDGSNEAGGIYQVLEIP 245
Qy      241  YKGFESLIILPAEGMDIEEVEKLIATAQOILKWLSEMGEVEIISLPFKVEOKVDFXD 300
Db      246  YEGDEISMLVLRSRQEVPLATLEPLVKAQLVEEWANSVKQKVEVYLPRTVEQEIIDLKD 305
Qy      301  VLXSLNITEIFSGGCDLSGITSSEVYVSQVTKVFFEINEDGSEAAATSTGHIHPVIMSL 360
Db      306  VLKALGITEIFI-KIKFDSLSDNKEIFLSKAIHKSFLVNEEGSELVS-GM-IQLVGCC 362
Qy      361  AQSQFIANHPFLIMKHNPTESILFMGRVTNP 392
Db      363  LYPQVIVDHPHFFLIIRNRRTGTILFMGRVMHP 394

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Search completed: October 21, 2004, 06:46:59  
 Job time : 41 secs

